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Murder by Poisoning.—Court of Common Pleas of Hardin Co., Ohio, December Term, 1860. [*Before Wm. Lawrence, Judge.*] *The State of Ohio* vs. *Peter Priest.* Reported by Hon. WM. LAWRENCE, Judge of the Court of Common Pleas of the 3d Judicial District of Ohio; and T. G. WORMLEY, M.D., Professor of Chemistry and Toxicology in Starling Medical College, Columbus, O.*

The indictment charges that defendant administered metallic arsenic, on the 2d day of May, 1860, to Joseph Saul, in Kenton, Hardin County, with intent to kill.

* The writers propose to report a series of trials for murder by poisoning, in which one or both have been engaged within the last few years. All matters of a legal nature and of general evidence will be reported by Judge Lawrence; those bearing upon medicine, pathology and chemistry, by T. G. Wormley. These reports will be based entirely upon the written evidence taken at the time of each trial.

The principal reported cases of murder by poisoning, in Ohio, are:

Farrer v. *State*, 2 Ohio St. R. 54; S. C., 9 West. Law Journal.

Summons v. *State*, 5 Ohio St. R. 325; S. C., 9 West. Law Journal.

Robbins v. *State*, 8 Ohio St. R. 131.

State v. *Culbertson*, Vol. 15, No. 6, Ohio Medical and Surgical Journal, November, 1863—Common Pleas of Muskingum County, Ohio.

State v. *Hiram Cole*, Common Pleas of Geauga County, Ohio, September Term, 1857—Ohio Med. and Surgical Journal, Vol. 11, No. 4, March, 1859.

C. H. Gatch and *John N. Abston* appeared for the State.

A. S. Ramsey and *L. Hoge*, for defendant.

The evidence in this case tends to show, that Joseph Saul, an infirm old man residing in Franklin county, Ohio, conveyed his property there, worth about $1000, to Peter Priest, in consideration of which Priest agreed to support him during his life. That Priest married an adopted daughter of Saul, raised by him, and Saul resided with Priest and his wife; that Priest sold his Franklin county property, and bought a small farm in Paulding county; that he with his wife and Joseph Saul started to remove from Franklin county to Paulding county, to reside there; that on the way Saul was taken violently and suddenly sick, at Big Island, Marion county, shortly after he went to bed; that the next day they went on to Kenton, and staid all night at the house of a relative of Priest the defendant, where Saul died on the night of the day after which they arrived, and was interred the next day, May 5, 1860, in the cemetery near Kenton.

There was evidence tending to show that Priest had threatened to kill Saul, that Saul was burthensome to Priest.

On the 13th June, 1860, the body of Saul was exhumed. The gall bladder with a portion of the liver attached, the stomach and a portion of the small intestines, were taken out and delivered to Professor T. G. Wormley of Starling Medical College, Columbus, Ohio, for chemical analysis.

The evidence against the defendant was circumstantial, tending to show the administration of arsenic, neglect in speedily procuring a physician, inattention in giving medicine during the last illness, hasty burial, with other circumstances indicating guilt.

The defense gave evidence tending to rebut and explain the evidence for the State.

The medical evidence was substantially as follows:

Dr. John T. Baughman examined.—I was acquainted with Jos. Saul; I was present when his body was exhumed. The surface of the body was in a gangrenous condition, assuming mortification. It was not, strictly, mortified, but the skin was becoming discolor-

ed. It must have been two months before I saw him exhumed, that I last saw him. I was present at the *post-mortem* examination of the body. The stomach was in a considerable state of inflammation. The upper portion of the small bowels had been in a high state of inflammation; lower down the bowels the inflammation was less. The liver presented a yellowish deposit. There were some little traces of this yellowish deposit on some portions of the bowels. It is difficult to learn, from a *post-mortem* examination, that a person had died from arsenic.

Dr. Munson examined.—I made the *post-mortem* examination of the body of Jos. Saul. The appearances were those already described by Dr. Baughman. I took out the stomach entire, with a portion of the small intestines attached; also a portion of the liver. The portion of liver taken out had the gall bladder attached. The parts taken out were carefully inclosed in a glass jar, sealed, and labeled. They were directed to Professor Wormley, Columbus, Ohio.

Dr. J. F. Hance examined.—I was present at the *post-mortem* examination of the body of Jos. Saul. The appearances were those already described. The first time I saw the deceased was on Thursday evening, the 3d day of May last, when he was alive. I found him much prostrated and laboring under gastro-intestinal inflammation; his pulse was feeble and intermittent. He was not suffering much pain, but was rather comatose; his bowels were very much swollen and hard, somewhat tympanitic. He did not seem to be sick at the stomach. I attempted to rouse him, but could not. I gave it as my opinion that he would be dead in the morning. I prescribed a cathartic, and warm applications to the bowels. I saw him again about 11 o'clock that night, and found him in about the same condition. The next morning I saw him again, and found him still sinking. I did not see him again until about 9 o'clock in the evening, when he was still in about the same condition. I do not know that the medicine I had left him had been administered. The next morning I found him dead.

Prof. T. G. Wormley examined.—Late in the afternoon of the

14th of June last, the express agent at Columbus, Ohio, delivered to me at my laboratory, a box which I here recognize. It had placed upon it a letter, which was tacked over two of four screws which secured the top of the box, in such a manner that the box could not be opened without removing the letter. This letter was directed to my address at Columbus, Ohio. I locked the box up in my laboratory, and it remained there till June 20th untouched. On the morning of that day I removed it to the laboratory of Starling Medical College, and there opened it. I found it to contain saw-dust, in which was packed a bottle about this size, and bearing a similar label. The bottle contained some animal matter and some fluid, which, when taken out and examined, proved to be a human stomach, to which was attached a portion of the small intestines; it also consisted of, apparently, a portion of human liver with gall bladder attached. I immediately prepared to submit these parts to analysis, using the stomach and portion of small intestines for one series of investigations, and the portion of liver and gall bladder for another.

I will now detail the analysis of the gall bladder and liver. In connection with the condition of accompanying organs, the liver was in a comparatively good state of preservation; it was tough, and cut with great difficulty with scissors; the gall bladder was whole, but had apparently been very much inflamed; it contained about two teaspoonsful of thick fluid. These organs (the liver and gall bladder) were introduced into a large porcelain dish and there acted upon by distilled water, which was mixed with about one-sixth of its volume of hydrochloric acid; the mixture was then boiled for about three hours, with the gradual addition of small portions of chlorate of potash; by this time the whole mass became fluid—that is, the organs had all dissolved. After the mixture cooled it was filtered through muslin, and then through filtering paper; it was then allowed to stand about twenty-four hours, when it was again filtered through paper. The solution had then passed into it sulphuretted hydrogen for twenty-four hours; at the expiration of this period there was quite a marked deposit having a

dark yellow color; this was filtered from the solution, and may have consisted of the sulphurets of either arsenic, mercury, antimony, tin, or some other metals, or only of organic matter. This residue was acted upon by a few ounces of pure ammonia, which would have dissolved the sulphuret of asenic, if present, and some organic matter: it might also have dissolved a small portion of sulphuret of antimony, if present. The other metallic sulphurets would not have been dissolved. This ammoniacal solution was then filtered to separate foreign matter; the solution was then evaporated to dryness, and then treated with strong nitric acid, and evaporated to dryness. The residue was then mixed with caustic soda and carbonate of soda, and then heated and again nitric acid added, and again heated. It was then dissolved in a small quantity of water and some concentrated sulphuric acid added, then evaporated to dryness and strongly heated. It now left a white residue. The organic matter being entirely destroyed the residue could now only consist of arsenic, salts of soda, and a trace of antimony, if this metal had been present in the original mixture. This residue was acted upon by a small quantity of pure water, which would dissolve the salts of soda and the arsenic but not the antimony. Under these circumstances the arsenic would be in the form of arsenic acid. It was now filtered and a stream of sulphurous acid passed into the solution; this would change the arsenic into arsenious acid, which is the state most favorable for the application of the re-agents. To a small portion of this solution hydrochloric acid was added and then a stream of sulphuretted hydrogen. This immediately produced a yellow precipitate, which could have been nothing else than the sulphuret of arsenic, as tin and cadmium, which also under certain conditions yield yellow precipitates with this re-agent, would have been separated by previous manipulations. I here present the liquid with its precipitate. This is a sulphuret of arsenic. Reinsch's test was then applied. The other is known as the sulphuretted hydrogen test. A portion of the liquid was acidified with hydrochloric acid, and heated to boiling; then small slips of clean copper were intro-

duced into the boiling liquid; these immediately became coated with a gray metallic covering; some of these I here present, with a slip of the copper not used, as a sample. This deposit, under the circumstances, could have been nothing else than metallic arsenic. There were twenty of these slips of copper thus coated; a few of them were introduced into a small tube and heated to redness; immediately a ring of crystals were volatilized or sublimed against the side of the tube in the form of crystals. I here present the tube with rings. This confirms beyond the possibility of doubt that the deposit upon the copper was metallic arsenic.

Marsh's Test.—1st. A small portion of the original fluid was introduced into Marsh's apparatus, and the jet of gas lighted, which burnt with a white, smoky flame. A piece of cold porcelain was then depressed into the flame, and this immediately received a metallic deposit. I present two pieces of this porcelain here. These, under the circumstances, could have been nothing else than arsenic; one of these spots was acted upon by the hydro-sulphate of ammonia, and it was not dissolved. Antimony, under the same circumstances, would have been dissolved. Another spot was acted upon by bleaching salt of lime—it was dissolved; antimony would not have dissolved. 2d. The horizontal portion of the tube through which the gas was passing from the Marsh's apparatus, was now heated to redness, and immediately there was a metallic deposit produced beyond the point heated; this could have been due, under the circumstances, to no other substance than arsenic. 3d. The gas was passed into a solution of nitrate of silver; it immediately produced a dark precipitate from which the liquid was filtered, and proved to contain arsenious acid. All these three reactions of Marsh's test prove beyond a doubt the presence of arsenic.

Ammonia sulphate of copper test.—To a portion of the original fluid, properly prepared, *ammonia sulphate of copper* was added, and it immediately produced a beautiful green precipitate, known by the name of Scheel's green, being a compound of arsenic and copper. These are all the tests applied to the liver and gall bladder.

I will now detail the analysis of the stomach and small intestines. The two openings into the stomach were tied. Upon cutting the organ open the internal surface showed signs of extensive inflammation and disorganization, more especially that portion toward the small intestines, which was very much ulcerated, the mucous membrane being in some places entirely destroyed. This inflammation also extended into the small intestines. The stomach and small intestines were cut to pieces and treated in precisely the same manner as has been detailed in regard to the liver and gall bladder. The same test being applied to the resulting solution with the same results, indicating the presence of arsenic; but not in as large quantities as found in the liver. There was a fifth test applied to this solution. It was the *ammonia nitrate of silver;* this produced a yellow precipitate which indicated the presence of arsenic. These five tests constitute the principal tests relied upon by chemists for the deduction of arsenic. Each one under the conditions applied proved by itself the presence of arsenic. The ordinary mode of ingress of arsenic is through the mouth and throat into the stomach; it is taken up by the blood and carried to different portions of the body, and partly deposited in these portions. This is more especially true of the blood that passes through the liver. I cannot say how much arsenic was in these parts, from the fact that there was no estimate of the quantity made. This would have consumed so much of the material as to preclude the application of some of the important tests. The largest quantity was found in the liver; this would show that the arsenic had entered the circulation and had been diffused through all the organs of the body, so that nothing short of an examination of the whole body would suffice to show the absolute quantity of arsenic present. My profession is that of a chemist and physician; am not at present a practitioner of medicine. Have been a Professor of chemistry about nine years, in Capitol University, and part of that time in Starling Medical College. The symptoms of arsenic introduced into the stomach are pain in the stomach, great thirst, vomiting and purging; vomiting is usually continuous; the

pain in the stomach is generally very severe and extends down into the bowels. These are the more prominent symptoms of poisoning by arsenic, but there are individual cases where some one or more of them are absent. The appearances after death are not constant and uniform. The action of the poison is often confined to the mucous membrane of the stomach; this is true though the arsenic be introduced into the body in some other way than by the mouth. The action on the stomach gives rise to inflammation of the mucous membrane. This extends down into the intestines. Sometimes the stomach may have a yellowish appearance; this might be due to the production of yellow sulphuret of arsenic. All the re-agents and apparatus used in this examination were known to be absolutely pure beyond a doubt. The liver was in a comparatively good state of preservation, considering the time. Arsenic is a preservative of animal structures—used in preserving anatomical specimens. I presented the arsenic here exhibited as the production of the results of examination. It could not possibly have come from any other source than the stomach.

The amount found in the stomach, &c., would be an unsafe dose —it would be less than an ordinary fatal dose—about three-fourths of the liquid obtained was used in the examination which gave these results. About one-fifth of the whole liver was used. Not able to state, from what arsenic I received, the whole amount of arsenic in the man, but the quantity found in liver was apparently greater than that found in the liver of an individual that I recently examined, whose stomach contained half an ounce of arsenic. The arsenic could not get to the liver direct from the stomach. It is taken up by the blood and the liver receives it from this fluid—it passes out of the system in various ways.

There was enough arsenic found in the tissue of the liver to indicate that enough arsenic had been introduced into the system to produce death. I was assisted, during this entire investigation, by Wm. Watt of this place, who acts as my assistant. None of this material was ever in his possession.

Cross examined.—From the quantity of arsenic found in this body, couldn't say how long it would take to produce death. The symptoms and effects seem to have little or no relation to the quantity taken, when it exceeds about two grains. Authors cite a case in which 40 grains proved fatal in fifteen hours; in another case 480 grains did not prove fatal for seventeen hours, and in another over 500 grains did not prove fatal—it was thrown off. It is a mooted question, whether the habits of a man, will effect the result of the quantity of arsenic taken. If taken in quantities, in themselves not fatal, it would depend upon frequency of doses. Arsenic will not accumulate in the system; it is not an accumulative substance. A man may take repeated doses without producing poisonous effects. The symptoms of sickness will appear in from two to four hours—some cases immediately, others in eight or ten hours. In this case, I should expect the poisonous dose would show its effects in from a half to one hour. Death generally takes place in from twenty to thirty-six hours. My re-agents *might* have contained arsenic, but they were examined and tested, in this special case, and were pure; they contained no arsenic. Great care was taken that it could not be introduced extraneously. No one had access to them when I was not by. Arsenic is not a normal constituent of the body. It may be found in earths and graveyards. The first usual symptom is dryness in the throat, then sickness of stomach, followed with pain, &c. These symptoms may exist without arsenic, and arsenic may exist in the stomach without all these symptoms. It would be a rare case to find all these symptoms independent of the presence of arsenic. Arsenic is destitute of taste; I never could experience any—have taken as much as was safe to take. Chemists understand by arsenic an elementary substance, but the name arsenic is frequently applied to arsenious acid. The arsenic upon the copper here is metallic arsenic; the other is arsenious acid.

The case was argued by counsel, after which the jury were fully charged by Wm. Lawrence, Judge. Verdict—not guilty.

Murder by Poisoning with Strychnine.—Court of Common Pleas of Marion county, Ohio, March Term, 1858. *State of Ohio* v. *Edward Robbins.* Reported by Hon. WM. LAWRENCE and T. G. WORMLEY, M.D.

The defendant was tried for the murder of Nancy Holly by administering strychnine to her on the 29th of July, 1857. Some of the questions of law involved in the case will be found in *Robbins* v. *The State*, 8 Ohio State Reports, 131, in which it was *first* held that an *intention to kill* is necessary to constitute murder in the first degree in cases of poisoning, contrary to the common law doctrine, and perhaps the grammatical construction of the Ohio Murder Statute. *Com.* v. *Desmarteau*, Sup. Court Mass., 24 Boston Monthly Law Reporter, 155, July, 1861; 1 Russ. on Crimes, 482; Wharton's Am. Cr. Law, sec. 930; Wharton on Homicide, 33, 358; 5 Western Law Monthly; *State* v. *Summons*, 9 West. Law Journal, 410 per Thurman, J.

Defendant's counsel moved to quash the second, third and sixth counts of the indictment, because they do not contain an averment that Nancy Holly *did not know* when she took the strychnine that it was strychnine, or any other poison.

By the Court, WM. LAWRENCE, Judge: The forms of indictments, as found in the books, are not uniform as to the averment now in question. Thus the following forms contain it: *State* v. *Summons*, in Warren's Criminal Law, 33; *State* v. *Farrer*, in Warren's Criminal Law, 34; Wharton's Criminal Precedents, 57, 61, 63, 64; 3 Chitty's Crim. Law, 773, 775; Manor's Crim. Law, 236; Davis' Precedents, 185.

The forms in Wharton's Precedents, 53, 62, 63, 66, do not contain the averment. And so *Regina* v. *Alison*, 9 Carrington & P. 418. I do not find any elementary book, or reported case, which requires the averment, unless the Summons case, 9 West. Law Journal, 410 is to be regarded as such authority. Judge Thurman in that case remarks:

"For if his [defendant's] intent was to poison some one else [not the deceased], and she [the deceased] *in ignorance* took the

poison, and in consequence of doing so died, he is equally guilty under this indictment as if his specific design had been to destroy her" [the deceased].

If the deceased *knew* she was taking strychnine, and even consented to take it to produce death by procurement of the accused, then the defendant is guilty of murder as shown by numerous authorities. 4 Blackstone, 189; 1 Hawk. P. C. ch. 27, sec. 6; Keilw. 136; Moor, 754; *Rex* v. *Sawyer*, 1 Russ. 424; *Rex* v. *Evans*, 1 Russ. 426; 4 Chit. Bl. 190, note, also 201; Wharton's Law of Homicide, 98–158; *Com.* v. *Bowen*, 3 Mass. 359; *R.* v. *Alison*, 8 C. & P. 418; *R.* v. *Dyson*, Russ. & Pry. C. C. R. 528; 4 Chit. Bl. 34–142, note; Roscoe Cr. Ev. 203–722; *R.* v. *Russell*, Moody C. C. 336; Wharton Prec. 37, 46, 66, note; 34 Eng. C. L. 458; 19 Eng. C. L. 425; 4 C. & P. 369; 2 Arch. Crim. Pr. (Waterman's Notes) 252; 1 Russ. on Cr. 508.

Yet to hold the averment necessary, is to ignore all these authorities, and exempt from guilt all who can persuade the ignorant and deluded to consent to die by knowingly taking poison.

The averment, if made, is mere surplusage, and need not be proved. 1 Chit. Cr. Law, 174–232; 1 Greenl. Ev. sec. 60 n.; Wharton Cr. Law. 292.

It is possible a reason might exist at common law for the averment. By that law suicide was a crime, punished by forfeiture of the goods of the *felo de se*, and admitting of accessories before the fact. 4 Blackst. 189–190.

A person *actually present* giving poison to a suicide was a principal in the crime, or if absent, but having prepared and advised the taking of poison by a person ignorant of its poisonous quality, he was still a *principal*. 4 Blackst. 34. But as the *felo de se* who *knowingly* took poison prepared by the persuasion of an absent person committed a crime punishable by disgraceful burial and forfeiture of goods, the absent person in such case was deemed an accessory before the fact, and as such might be indicted and punished. The English indictments, therefore, averred that the deceased did not know of the poisonous qualities of strychnine ad-

ministered so as to make the accused a *principal* and not an accessory merely.

But in Ohio suicide is not punished as in England. One who procures another to commit suicide is a principal, and can not be an accessory. The averment, therefore, has no significance, and is unnecessary here.

The motion to quash is overruled.

The principal evidence given during the progress of the trial was substantially as follows:

Ferdinand C. Ruhermond examined.—I first saw the person whose name is reported to be Nancy Holly, on Main Street, in the town of Marion, about 2 o'clock P. M., July 28, 1857. She was speaking to some men. I next saw her passing up the street. I soon saw her again and asked her some questions. She said she had lived at Union where her husband had died about five months previous, and she wished to go to Cleveland. I found she had not money enough to take her there. I engaged her to come to my house and do general house work. She staid at my house that night, and I saw her the next day at breakfast, dinner and supper. When I came home to supper my wife remarked that Nancy had told her that she expected to be confined in about three months. I told my wife not to say any thing about it to Nancy, and that I would speak to her myself in the morning, and propose to her to go to Cleveland.

In the evening about 10 o'clock, as I was about to close my saloon, A. D. Mathers, came to me in great haste, and told me that my wife wanted me to come home immediately, as that strange woman at my house was very sick. I started and run very fast. Before I got to the house I heard her scream. When I ran into the house my wife said that woman was very sick up stairs, and she was afraid she was going to die. I ran up stairs. Nancy was screaming and making very great noise. I went up to the bed and requested her not to make so much noise. She was lying on her back with her arms stretched out, and shaking, twitching and

convulsed. I ran back to procure a physician and met A. D. Mathers, who volunteered to go. I returned to the house. She, Nancy Holly, asked for water, and asked me to hold her. She suffered very severely from strong spasms. I cannot say positively if they continued all the time, but they were more severe at some times than others. I judged so because I held her wrists with my hands, and in her spasms she raised my weight entirely off the floor, as I was bearing down upon her wrists. At the same time the women had hold of her feet. She seemed to be convulsed all the time more or less until she died. From the replies she made to questions, I should judge she was perfectly rational all the time. She seemed to be aware that she was dying. She replied to a question just before she died. She said, O Lord! send for a Doctor, I must die. She said this some time after I came into the room. A physician did not come before she died. She died about three quarters of an hour after I came to the house. I am certain I heard her exclaim, "O Lord! I must die." When I requested her not to scream so, she said she could not help it. I did not notice her eyes particularly—her face kept remarkably natural. At one time she asked for air. The window at the head of her bed, and the door of her room were open. It was a warm evening, and all in the room experienced oppression.

Prof. J. L. Cassells, testified as follows.—I reside in Cleveland—am a physician and professor of Chemistry in Cleveland Medical College. I have been a physician since 1834, and for twenty-two years a teacher of Chemistry and Materia Medica. Strychnia taken in poisonous doses acts solely on the spinal chord after being taken in circulation, and does not affect or act upon the brain. It expends its power upon the spinal chord. A person may die of strychnia and not have the mind impaired at all—they never do. The symptoms of death by strychnia are these: the first symptom is a sensation of heat and thirst in the stomach—then a pulling back of the head—then several tetanic convulsive twitchings—these

twitchings are sudden jerks, bending of column of spine, rounding of chest, difficulty of breathing, sense of suffocation, setting of teeth, firm closing up of mouth and muscles of throat or tetanus—the whole surface of the body sensative to touching or moving of bed clothes or sounds—the surface of the body generally moist and the mind clear—the fingers bent in—the toes bent in—the hollow of the foot concave and muscles bent. These continue until death ensues, and then the body is rigidly stiff until decomposition. These tetanic convulsions involve all the voluntary muscles under the control of the will. I think, from the extreme violence of the attack of strychnia on the system, common people would think death would ensue. It is difficult to say whether a person dying of strichnia would be more conscious of approaching death, than persons dying of other causes—there being no previous diseased action, they might think they could come out of the convulsions. I might add we have other diseased action resembling strychnia in its results—thus, children have spasms by eating indigestible substances, and women have hysteria, which common people might mistake for strychnia convulsions. The statements as to strychnia are predicated on the idea that the patients knew they had taken strychnine, but it would be so if they knew they had taken any drug, and experienced the same symptoms, provided the mind was not impaired. I should think that the symptoms experienced from strychnine poison, from the very first attack, suggests the idea of approaching death, from the severity of the symptoms, especially the sense of suffocation.

Cross Examined.—I heard the evidence of Ruhermond, and he did not speak of suffocation as a symptom. Strichnine could not exist as a poison in the system without the sense of suffocation. I should think a patient would be very apt to allude to the sense of suffocation, and it would be very obvious to the observer. The shutting of the teeth and the contraction of the muscles along the throat described by Ruhermond, the witness, could not very easily

take place without involving the large muscles of the chest, which would give the sense of suffocation. With regard to the eye, so far as my experience and the books are concerned, strychnia is not uniform, sometimes the eyes are enlarged and sometimes not involved at all. There is probably not a great deal of pain in the chest, but there is a great distress there, just as though a person was pressing. There is not acute pain any where further than that experienced by cramping, it is a disagreeable sensation, not acute pain, and this extends to all the voluntary muscles. In the absence of the sense of suffocation a person would not apprehend death any more than in hysteria, or other disease producing similar symptoms. I have known cases of hysteria where the sense of suffocation existed. Strychnia is taken into the circulation, and operates upon the spinal cord, and thence on the nerves that reach the voluntary muscles.

[The foregoing evidence was offered to lay the foundation for proof of dying declarations of Nancy Holly.]

Ferdinand Ruhermond recalled.—Nancy Holly requested me to give her some water, and I attempted to do so but she could not swallow. I asked her if she had taken any thing; she replied yes —a quinine powder given her by a Doctor. She afterwards replied that his name was Edward Robbins, and that he had given her the medicine for the purpose of destroying her child.

Mary A. Ruhermond examined.—I am the wife of Ferdinand Ruhermond. I first saw Nancy Holly on the 18th of July—I think it was the 18th. She came to my house in company with my husband. She said she was going to Cleveland where she had an aunt, and that her husband had died about five months previous. She said she wanted to get work. The next day she inquired if there was any place here where they took sick people, and said that she expected to be sick in about three months. She retired about 9 o'clock that evening. Soon after she came down for water, which she took up stairs in a glass. As I was about to retire I

heard a noise, which I thought was on the street. I heard no more noise and went to bed. After I got to sleep I again heard hallooing, and found it to proceed from up stairs. I went up and asked Nancy what was the matter. She was still screaming, and said, "Oh, can't you get a Doctor—I must die." Seeing that she was getting a spasm, I dashed some water in her face. I think this was the most severe spasm I saw her have that night. She continued to say, "Oh, I must die." I did not see her die.

Nancy Thorp examined.—I saw Nancy Holly on the night of her death, just before Mr. Ruhermond came in. She exclaimed, "O Lord, I must die." I remained in the room until her death. She said she could not help screaming. She asked for some water. She said she had taken a quinine powder given to her by a Doctor. She afterwards said that the Doctor's name was Edward Robbins, and that he had given it to her for the purpose of destroying her child. I heard her say twice that she must die.

R. L. Sweeney examined.—I practice medicine in Marion. Between 10 and 11 o'clock on the night of July 29th, 1857, I was called to visit a lady who was sick at the house of Mr. Ruhermond. I found the woman dead. She was lying on her back, with her head slightly inclined to the left and very much drawn backwards. Her complexion was dark, as was also the surface of the body; rather livid; the pupil of the eye dilated; all the voluntary muscles were in a state of rigid contraction. Her arms were flexed, and also her hands; her fists not tightly clenched, but her fingers closed and contracted. Her arms were flexed so tensely on her chest that it was impossible to move them with any ordinary power—at least the power we used to move them raised the body before the arms would yield. Can't say how long the body was dead. It was still warm, and there seemed to be some perspiration or moisture upon the surface. I think it was not more than two minutes after I was called until I reached the body. Her feet were extended and concaved; her legs were slightly thrown apart.

The muscular rigidity continued as long as I had any knowledge of the body. On the room stand I found one or two spoons, one of which presented the appearance of a powder having been taken out of it, as some little particles of the powder still adhered. I also found on the stand a piece of paper which had the appearance of having been folded. Upon examining this paper I found a small portion of a white powder adhering to it. The powder had a very decided bitter taste, similar to that of strychnine. I think I could distinguish the bitter of strychnine from any other bitter substance by tasting. I carried the paper, with another paper which seemed to be an outside wrapper, to Professor Cassels in Cleveland. A *post-mortem* examination of the body was made on the 30th July, 1857. The bowels, externally, appeared healthy; all the internal organs of the abdomen appeared healthy. She was pregnant with a six months' fœtus. We found a large amount of dark blood in the examination of the abdomen. On examining the chest we found a slight adhesion of the left lung; there was no other appearance of disease in the chest. The heart was healthy. I removed the stomach and its contents and delivered them to Professor Cassells at Cleveland, Ohio.

J. M. Christian.—I am a physician. I fully concur in the statements of Dr. Sweeney. I did not see the body until after death. The appearances after death were such as would arise from strychnine. If she died from the effects of a poison, I should say that it was strychnine.

[The dying declarations having been given in evidence, Professor Cassells resumed his evidence as follows:]

Dr. Sweeney brought me the stomach of Nancy Holly, on the 30th July, 1857, and also a paper—this paper, which I have kept in my possession ever since. [The papers are here produced, found in the room where Nancy died, as folded by Dr. Sweeney.] In the inner paper I found a white powder attached to the inside. There was a very minute quantity. I tested this for strychnia—

the white powder in the paper. I applied what is called Otto's test, which is adding sulphuric acid to the powder, and dropping into this a minute crystal of bi-chromate of potash. I applied this on white porcelain. This gave a very delicate lilac color, which is indicative of the presence of strychnine, and I of course concluded that the powder on the paper was strychnine, or some of its salts, which are equally poisonous with strychnine. I made no other test of this—this was satisfactory, and is the most approved test.

I then proceeded to examine the stomach. I first examined the inside of the stomach, which was healthy—it had not been opened before it reached me. I took the contents of the stomach then, which were about a half a pint of liquid matter—filtered this through muslin, added acetic acid to it, then boiled it, filtered this through paper, evaporated it to near dryness, added chloroform, then filtered this through paper, and evaporated this to dryness over a vapor bath, then applied the same test—Otto's test, to what remained, which gave no indication of strychnine or its salts.

Then I took the stomach and cut this into small pieces—boiled it in distilled water with acetic acid—filtered through muslin, evaporated it to near dryness, then added chloroform, evaporated this to dryness and applied Otto's test, which gave strong indications of strychnine. That is the result of the examination of the stomach, and the contents of the papers. I am satisfied from these tests that strychnine had been taken in the stomach. I have no doubt of it. The probability is that the strychnine adheared tenaciously to the mucous membrane of the stomach, and perhaps some of it might have been in the substance of the stomach, and hence the reason why I found strychnine in the substance of the stomach, but not in its contents. It was not washed out when I took the contents out. I was satisfied of the presence of enough of the strychnine in the stomach to have produced death, for the reason that a medicinal dose is so small as not to leave any of the strych-

nine in the substance of the stomach, and the minimum poisonous dose which produces death, leaves none of the strychnine in the substance of the stomach, so that an individual could not possibly live after taking sufficient to leave some in the stomach. While there is any particle of it remaining in the stomach after death, the death must have been produced by it.

[In the above examination of the stomach and its contents, it will be observed that the cut tissue of the stomach was boiled with water containing acetic acid, and the strained liquid, after being evaporated to near dryness, treated with chloroform. The chloroform was then evaporated to dryness, and the residue examined by "Otto's test, which gave strong indications of strychnine."

Now under these conditions it is absolutely impossible that strychnine could have been present in the chloroform residue, from the fact that it would have been present in the strained liquid obtained from the stomach tissue, in the form of acetate, in which form it is insoluble in chloroform, and therefore could not have been extracted by this liquid. As the same method of analysis was followed in the examination of the contents of the stomach, the poison would not have been detected, even if present in large quantities, and therefore its non-detection, under the circumstances, was no evidence that it was not present. If the precaution had been taken to render the liquid alkaline before treating it with chloroform, and thus set the strychnine free from its acetic acid combination, then it would have been in a form in which the chloroform could dissolve it, and therefore would have been taken up when treated with this liquid. But even if this precaution had been taken, without further purification than stated above, the original liquid would have contained so much foreign matter which would have been extracted along with strychnine when the mixture was treated with chloroform, that the test applied would have failed to show its presence, unless possibly there had been an extraordinary quantity of the poison present in the contents of the stomach; it is certain that

in all cases it would have failed to detect the poison present in the substance of any of the tissues. Again, it is remarkable that the chloroform, if thoroughly agitated with the above acid liquid, separated at all, as it usually, when agitated with as complex organic liquids as the above necessarily must have been, forms a white frothy mixture, from which it does not separate upon repose.

This is at least the second instance in this country, in which chemical witnesses have sworn to the presence of a poison, when, under the circumstances, as detailed in their evidence, it was absolutely impossible for it to be present in the substance examined by their tests.] W.

[The paper is here produced containing the powder found in Robbins' house, up stairs.]

I tested this powder, and it is strychnine. It is the same powder produced here on trial heretofore. Strychnine operates very speedily after it is taken into the stomach—producing death in from fifteen minutes to an hour and a half. I have known instances where death occurred in an hour, and some in three-quarters of an hour. Some individuals are much more susceptible to the action of strychnine than others—owing perhaps somewhat to temperament. I have heard the examinations of Drs. Sweeney and Christian, and I do not think of any thing further to suggest as to symptoms resulting from death by strychnine. The sense of suffocation is universal. I think it remarkable that the sense of suffocation should not be observed—should not have been observed in this case. It would generally attract the attention of ordinary observers. Calling for air would be one evidence of a sense of suffocation, but I think it would be observable from other indications. The sense of suffocation might not have been observed, and I wonder that so much was so intelligently observed in relation to the symptoms. In the excitement which would prevail, and with persons having no medical skill it is not remarkable that the sense of suffocation should be overlooked, and I think the

witness displayed an unusual degree of observation in noticing so many things as he described. There is no question but this individual died of strychnine.

For additional evidence see *Robbins* v. *Ohio*, 8 Ohio State Reports 135—145.

The case was argued by JOHN F. HAME and OZIAS BOWER, for the State.

Among the points made and authorities cited were these:

If defendant gave poison to Nancy Holly, in Shelby county, to be taken to Cleveland, or whersoever she might go, and there take it, and if she took it in Marion county, defendant is guilty of administering poison in Marion county 1 Bowvier Dic. 80 Title—Administering.

Rex v. *Wm. Cadwin*, 2 Eng. Cr. Cases, (1 Moody), 114.

King v. *Hannah Harley*, 19 Eng. Com. L., (4 Car. & P.) 369.

Com. v. *Earl*, 1 Wharton Pa. R. 555; 3 Greenl. Ev. sec. 135; Common to kill paramour, *King* v. *Russell*, 1 Moody Eng. C. C. 356, a case of this kind, so of Helen Jewett and Maria Cornell.

James H. Godman, Jacob S. Conklin, Peleg Bunker, for defendant.

By the statute, administering poison is one crime and causing it to be administered is another. Therefore, defendant cannot be convicted of administering poison in Marion county, since he was not here; and he is not indicted for causing it to be administered. Crimes Act, sec. 1; Wharton. Am. Crim. Law, 81; Russ. on Cr.

Circumstantial evidence unsafe. Cases of conviction of innocent parties—1 Western Law Journal 241, 528; 4 West. Law Jour. 25.

Dangerous to rely on dying declarations of Nancy Holly. Smollett says, the most potent agency for evil is a corrupt, disappointed woman. See 4 Book of the Æniad,—the story of Dido and Æneas.

After argument the jury was charged by WM. LAWRENCE, Judge. The charge is reported in full in 8 Ohio State Reports

147; in which case, also, will be found the ruling of the Supreme Court upon various legal questions. Verdict of guilty.

At 11 o'clock, Saturday, March 27th, 1858, the prisoner was brought into court. Counsel present.

By the Court.—The defendant, Edward Robbins, is now in court. A motion has been filed by his counsel for a new trial, and I understand counsel now to submit it without argument.

Counsel.—The motion is submitted.

By the Court.—I have duly considered the motion for a new trial, and after the most mature consideration of the whole case in all its respects I am constrained to overrule it. The evidence in the case clearly justifies the verdict of the jury. The defendant's guilt was proved beyond any reasonable doubt.

I have considered and reconsidered the charge given to the jury upon the law of the case, and I feel that it was not only correct in every particular, but so written, as to secure to the defendant every legal right to the fullest extent, and at the same time direct the attention of the jury to every consideration, both of law and fact, which could properly be suggested by the Court in his favor. Conscious of no error whatever—confident that the majesty of the law has been vindicated in a cause demanding it, the motion for a new trial is overruled.

The prisoner was then sentenced to be hung on the 18th of June, 1858.

THE STATE OF OHIO, *vs.* EDWARD ROBBINS. } Indictment for murder in the 1st degree.

The defendant now comes and moves the Court to set aside the verdict rendered by the jury in this case and grant a new trial for the reasons following, to-wit: 1st. Because the verdict of the jury is against the evidence and for the State when it should have been for defendant.

2d. Because the Court erred in admitting in evidence to the jury the declarations of Nancy Holly.

3d. Because the Court erred in charging the jury that it was not necessary to the conviction of the defendant of the crime of murder in the first degree, that the jury should find that the defendant intended to take the life of Nancy Holly.

4th. Because the Court erred in charging the jury that they must either acquit the prisoner altogether or find him guilty of murder in the first degree.

5th. The Court erred in charging the jury that it is the exclusive province of the Court to determine what the law is, and the jury have no right to hold the law to be otherwise in any particular than as given to them by the Court.—March 25, 1858.

SUPREME COURT OF OHIO.

Edward Robbins v. *The State of Ohio.*

Writ of error to reverse the judgment of the Court of Common Pleas of Marion county.

BARTLEY, Ch. J., held:—

1. That a party, indicted for murder in the first degree, has no right, under the present state of the law, to elect to be tried in the District Court, as he had under the former constitution of the State, to elect to be tried in the Supreme Court of the county.

2. The rule, that a judgment on a general verdict of guilty on an indictment containing several counts, some of which are good and some bad, be sustained, is not varied by the circumstance that a demurrer of the defendant to the bad counts was overruled, after which the defendant plead not guilty to the whole indictment, it not appearing from the record that the defendant was prejudiced by the introduction of evidence under the bad counts, which was not competent under the good counts.

3. Evidence of dying declarations is not excluded by the constitutional provision, that the accused shall be allowed to meet the witnesses face to face—the objection to such evidence going to *the competency of the evidence, and not to the competency of the witness.*

4. It is essential to the admissibility of dying declarations as evidence, that it should be made to appear to the Court by preliminary evidence not only that they were made *in articulo mortis*, but also made *under a sense of impending death*, which excluded from the mind of the dying person all hope or expectation of recovery.

5. In all jury trials it is the peculiar province of the jury to determine the questions of fact and that of the Court to determine the questions of law presented, and in the trial of a criminal cause it is the duty of the jury to receive the law as determined by the Court, and no juror can right-

fully disregard the law as declared in the instructions of the Court to the Jury.

6. The overt act of homicide by *administering* poison, within the meaning of the law, consists not simply in prescribing or furnishing the poison, but also in directing and causing it to be taken, so that if the poison be prescribed and furnished in one county to a person who carried it into another county, and there, under the directions given, takes it, and becomes poisoned and dies of the poison, the administering is consummated, and the crime committed, if committed at all, in the county where the person is poisoned.

7. Where a drug is administered to a woman pregnant with a quick child, with intent not to kill the woman, but to produce abortion, and the woman dies from the effects of the drug, the offense can not constitute murder in the first degree under the criminal statute of this State.

8. In case of homicide by administering poison, or causing the same to be done, the accused can not be convicted of murder in the first degree where there was *no purpose or intent* to kill the person poisoned, inasmuch as the statute of this State has made *purpose or intent to kill* an essential element of that degree of homicide for which the punisment of death is inflicted.

9. Murder at common law has been superseded by our statutory provisions in relation to homicide; and, although in homicide committed in administering poison, or in perpetrating or attempting to perpetrate either of the felonies mentioned in the statute, the turpitude of the felonious act is made to supply the place of the *deliberate and premeditated malice* requisite in the first class of murder defined, yet the *purpose to kill* expressed in the statute applies to each of the several classes of murder in the first degree, and this results not only from a fair grammatical construction of the language of the first section of the statute, but also from its reasonableness and consistency with the humane spirit of our laws, as well as the context of the first section with the provisions of the section and the third and thirty-seventh sections of the statute. Inasmuch as the language of the second section has undeniably made *malicious purpose* to kill essential in all murder in the second degree, it could not have been the reasonable intent of the law to punish any kind of *unintentional* killing, or killing *by misadventure*, with death. And as the third section has made *all kinds of unintentional killing*, while the slayer is in the commission of an unlawful act, manslaughter, the first section must be construed consistently therewith, and not as making exceptions, and imposing the penalty of death for acts which would fall within the plain language of the third section. And the thirty-seventh section of the statute, expressly recognizing *an intent to kill* as an element of murder by poison, cannot be reasonably reconciled to any other construction of the first section.

Judgment of the Common Pleas of Marion county reversed, and cause remanded.

Swan and Brinkerhoff, J.J., dissented to the eighth and ninth propositions, holding that killing another in the perpetration of rape, arson, robbery, or burglary, is murder in the first degree; and every evil intent necessary to constitute murder in the first degree in such case is, in law, incontrovertibly implied.

The Court also held that it was error to say to the jnry that if they found defendant *guilty as charged*, they should return verdict for murder in the first degree.

If this be so, then, is it not error for a jury to say simply guilty as charged in burglary, assault with intent to kill, etc., as they include other crimes?

Under this there can be no conviction of murder in the second degree, because, as it is held above, that giving poison is evidence of *malice aforethought*, and as *an intent to kill* is necessary to make murder in the second degree, if the intent to kill is proved it is necessarily murder in the first degree.

Bartley says above, that section three covers *all kinds of unintentional killing*, etc. This can not be so, as it only covers all kinds of unintentional killing *where malice is absent.* As this is so, how can a man be convicted of manslaughter for giving poison, when the giving of poison proves malice? Can there be manslaughter with malice aforethought? Bartley would seem to hold he might be guilty of manslaughter.

Above I have annexed syllabus of decision by Supreme Court. It will be seen the 7th and 8th propositions are those upon which the sentence is reversed. Swan and Brinkerhoff dissented as to 8th and 9th but not as to 7th.

Three of the Judges hold, *a purpose to kill* necessary to constitute murder in the first degree in all cases named in section one of the crimes act, whether *forcible murder*, murder by poisoning, rape, arson, robbery, etc.

I have stated my reasons for thinking that was not the law.

But Swan and Brinkerhoff hold, that a purpose to kill is not necessary in rape, arson, robbery, and burglary, but a purpose to kill *is necessary* in case of death resulting from poisoning. They

hold, as I am told by Conklin, that *murder by poisoning*, as defined in section one of the crimes act, is so modified by Sec. 163, page 297 of Swan's Stat., that an *intent to kill* is necessary to bring it within murder, otherwise it is only a crime under Sec. 163 [or possibly manslaughter?]

I think as to this they are wrong—

1. Because Sec. 163 was passed by a different Legislature from that which passed section one of the crimes act, and the *intention* of section one is not to be gathered from Sec. 163. That is a question of construction.

2. But Swan and Brinkerhoff, I suppose, do not put it upon that ground, but upon the ground that section one has been *modified* by Sec. 163. This I think cannot be so, because,

3. Repeals by implication are not favored. The statutes may, and should, be construed together, *in pari materia*, and each can have a subject-matter to operate on.

Upon the idea of Swan and Brinkerhoff, that no intent to kill is necessary in rape, arson, etc., and that consequently no intent would be necessary in poisoning if left to the meaning of section one alone, it involves the absurdity that an *intent to kill* is necessary to constitute murder in the first degree by poisoning, but not by rape or burglary, holding that a burglary is higher crime than giving poison to kill a fœtus.

Suppose Sec. 163 was now repealed, where then would poisoning stand?

Sec. 163 only applies to women pregnant with *quick* child. It does not name *poison*, and should be construed as applying to other drugs, etc., than those provided for in section one.

It would seem the overruling of the demurrer was not deemed ground of reversal because no injury resulted, and *possibly* because, under that count, the defendant might have been found guilty of manslaughter.

It would seem that it was not held error to charge the jury, that

if the proper facts were proved, that the jury could not find defendant guilty of any less crime than murder in the first degree. Sec. 39 only relates to form of verdict, does not give power to disregard the law.

It would seem to me that an intent to kill the *fœtus* was a sufficient intent to kill. If a party kills *one person* while he intends to *kill another*, that was murder. But how in Ohio?

Perhaps it would have been well to have charged more specifically, that to constitute murder the poison must have been given in *poisonous doses*, as it may be given in less than poisonous doses.

Judge Bartley seems to hold, that *the statute* (Sec. 1) makes poison, rape, robbery, etc., evidence of *malice aforethought*, and that this is the difference from murder by poison, etc., and other murder. But the statute had no such object, for poison, rape, etc., are, *independently* of the statute, evidence of malice aforethought, and the Legislature must have intended, in section one, to have distinguished poisoning, rape, etc., by *omitting an intent to kill*, or there is no difference in the kinds of murder at all.

By the common law, killing, while the slayer was committing ANY felony, was murder without an intent to kill. The Ohio statute intended to *limit* the felonies in which *unintentional killing* should be murder in the first degree.

Malice is an unlawful design to injure. Judge Wright's *definition* is scarcely a definition at all. He took it from an English case, in which a man rode a vicious horse in a crowd of men and killed one. The Judge described the character of his acts.

The statute describes manslaughter as *without malice*. But suppose a man intends *only* to chop off another's hands, that act is malicious, and if killing ensues it must be manslaughter, or only an assault.

There is, in *Vermont*, a case of murder in the second degree by poisoning.

American and Foreign Intelligence.

A New Method of treating Disease by controlling the Circulation of the Blood in Different Parts of the Body.

Dr. John Chapman, in a recent paper (*Med. Times and Gaz.*, July 18th, 1863,) claims to "have discov red that a controlling power over the circulation of the blood in the brain, in the spinal cord, in the ganglia of the sympathetic nervous system, and through the agency of these nervous centres, also in every other organ of the body, can be exercised by means of cold and heat applied to different parts of the back. In this manner the reflex excitability, or excito-motor power of the spinal cord, and the contractile force of the arteries in all parts of the body can be immediately modified.

"In order," he says, "to lessen the excito-motor power of the spinal cord only, I apply ice in an India-rubber bag about two inches wide, along that part of the spinal column containing the part of the cord on which I wish to act. On the same principle, the vitality of the spinal cord may be increased by applying hot water and ice alternately, each in an India-rubber bag, if very energetic action be required; if less vigorous action be necessary, I apply ice, or iced water only, using it several times a day, for a short time on each occasion, with a long interval between each application.

"If it be desirable to increase the circulation in any given part of the body, this I have found myself able to effect by exerting a soothing, sedative, depressing, or paralyzing influence (according to the amount of power required) over those ganglia of the sympathetic which send vaso-motor nerves to the part intended to be acted on. This influence may be exerted by applying ice to the central part of the back, over a width of from four to four and a half inches, and extending longitudinally over the particular segments of the sympathetic and of the spinal cord on which it is desired to act.

"For example, intending to direct a fuller and more equable flow of blood to the brain, I apply ice to the back of the neck and between the scapulæ; increased circulation in and warmth of the upper extremities are induced in the same way; thoracic and abdominal viscera can be influenced in like manner by applications to the dorsal and lumbar regions; while the legs and the coldest feet ever felt can have their circulation so increased that they become thoroughly warm by an ice-bag applied to the lower part of the back.

"The bags I use are of different lengths; of the width already

named for adults, and of lesser widths, of course, for children. I have had them made both of India-rubber, and of linen with a surface of India-rubber upon it; the former are the best. The width of the bag is equal throughout, except at the opening, which is narrowed to facilitate tying, and elastic to admit easily the lumps of ice. When the bag is full, I divide it, if a long one, into three segments; this can be done by constricting it forcibly with a string; the ice of the upper part is thus prevented from descending, as the melting goes on, into the lower part of the bag. I am preparing a bag on a new principle, which will be a great improvement on those I now use; but as it is not yet complete, I abstain from describing it here. I sustain the bag in the position intended by means of ribbon or tape passed through loops at the back of it, then over the shoulders, and round the body.

"Theoretically, I feel assured that by the methods I have described physicians will be able to control the great majority of diseases; experimentally, I have already received numerous and wonderful proofs that this assurance is well founded. By thus acting, by means of cold or heat, or both, alternately or combined, on the spinal cord and ganglia of the sympathetic, I have succeeded in completely arresting the fits of many epileptics, and in curing the following maladies: Paralysis; long-continued and extreme headaches; prolonged giddiness; extreme somnolence; a feeling f want of firmness in standing and of security in walking; habitual hallucinations; loss of memory; weakness and dimness of sight; ocular spectra; inequality of the pupils; lateral anæsthesia; incontrollable spasmodic opening and shutting of the mouth; cramps of the limbs (in two cases of the hands, incapacitating the patients to continue their work); numbness of the fingers, incapacitating the patient to pick up small objects, or to use a needle; paralysis of the bladder; incapacity to retain the urine more than a few minutes (two cases recovered to a surprising extent); profuse and too frequent menstruation; scanty and irregular menstruation; extreme menstrual pains; profuse leucorrhœa, with long-continued bearing down of the womb, and extreme pain of the back; habitual constipation; habitual diarrhœa; general coldness of the surface of the body, which has continued for many years; habitually and hitherto irremediably cold feet."

In treating paralysis originating primarily in a leison of the spinal cord, according to the above method, Dr. C. says: "My first effort is directed to the spinal cord, which I endeavor to restore to a healthy condition by increasing or diminishing the circulation of blood in it. I effect either of these results by directly modifying its temperature. Moreover, as fibres from the ganglia of the sympathetic are distributed to the sheaths and blood-vessels of the spinal cord, it can be influenced by cold and heat not only directly, but indirectly by acting on those ganglia. The restorative power which I have been able to exert in this manner is truly surprising, and, I believe, quite unparalleled by any influence ever exerted by medicine.

"If the paralyzed limb be cold, my next object is to increase the circulation in it; this I do, as already said, by lessening the vaso-motor power of those ganglia of the sympathetic which preside over the blood-vessels of the limb in question. In this manner I find that the circulation in it can be so increased as to make it even very unpleasantly hot.

"The health of the spinal cord having been improved, and the circulation and consequent nourishment of the paralyzed limb having been adequately increased, I then, and not until then, apply galvanism to the paralyzed muscle, if this aid seems needful. When thus applied, after the cord and limb have been acted on as described, the affected muscles prove far more rapidly responsive to the galvanic stimulus than paralyzed muscles usually are, and recover their natural size and strength with proportionate rapidity. But in fact such is the health-giving influence of the process I have described, that the limb will generally recover its healthy condition without the use of galvanism at all.

"The treatment thus described has reference to those forms of paralysis originating in a lison of the spinal cord; but I have found myself able to exert a curative influence scarcely less potent even when the paralyzing leison is within the skull, and certainly far more so than can be exerted by any internal remedy."

"To cure epilepsy," he says: "Care must be taken, in the first place, that all sources of eccentric irritation be removed; assured of this, as far as possible I direct all my efforts to accomplish two objects—first to lessen the excito-motor power of the spinal cord by lessening the amount of blood circulating in it; and, second, to prevent those spasmodic contractions of the cerebral arteries which induce the sudden loss of consciousness constituting the first phase of an epileptic fit. To achieve these objects, I order—

"*First*, and most important, ice to be applied to some one part or to the whole length of the back, and from two to eighteen hours a day, according to the special character of the case under treatment.

"*Secondly*, if the extremities be cold, to aid them in recovering their wonted warmth during the first day or two of treatment—by frequently immersing them in hot water, and by friction, also, in winter, by clothing the arms, down to the wrists, and the legs, down to the ankles, in flannel.

"*Thirdly*, as auxiliaries (1) to take abundant physical exercise, and to use dumb-bells when practicable, or other special means of increasing the respiratory activity and of expanding the energy of the spinal cord; (2) so to cut or dress the hair that it shall not cover or keep warm the upper part of the back of the neck; (3) to exercise the brain daily and systematically in some healthy study, or if this be impracticable, to insure regular mental activity by means of some interesting employment; and (4) to take care that the dress along the center of the back be light and cool.

"If ice be properly appled to the back, the extremeties, how-

ever cold, may be made quickly warm, so that in many cases the use of hot water may be wholly dispensed with; but in severe cases, where immediate derivation of blood to the extremities is urgently required, and more especially in winter, it is expedient to accelerate the influence of the ice applied to the sympathetic ganglia by the means just indicated."

In a subsequent paper in the same journal (Oct. 17, 1863), Dr. Chapman relates a case of hemiplegia benefitted by this mode of treatment, and claims to have benefitted by it two cases of diabetes.—*Am. Jour. Med. Sciences.*

Treatment of Diarrhœa and Dysentery. By Prof. SKODA.

Beyond every thing stands a strict regulation of the diet. When the intestinal canal is in a diseased state almost any subject introduced into the stomach acts mischievously, and it is not unfrequently necessary to suspend all food until the intestine is in a condition to bear it. Every solid article *eo ipso* is then mischievous, but even fluids, by reason of their temperature, may act as prejudicially. In most cases taking a few spoonsful of warm soup, or drinking a mouthful of cold water will immediately be followed by severe colics, and soon afterwards by evacuations. We must only allow lukewarm soups or other drinks, and that only by a spoonful at a time. Of course, these stringent rules only apply to very obstinate diarrhœa, and especially disentery, for there are many cases of temporary diarrhœa in which the patients continue to eat fruits and the like, and still soon get well. Such cases must, however, not be taken into account, and it is always most prudent at the commencement of a diarrhœa to cut off the supply of food as far as possible, and at all events to prohibit all articles likely to augment the affection.

Opium is the most valuable medicine in diarrhœa, for it keeps the sphincter in a state of permanent contraction, a contraction which is often propagated to the large intestine, and the small intestine is unable to propel its contents far enough to induce the irritation which causes their expulsion. When, by reason of this contraction, these contents are retained, their amount may become considerably diminished by the absorption of the fluid. Frequently, however, there is no spot of the canal which is not so diseased as to prevent such absorption taking place, and then the diarrhœa will continue in spite of the opium and of the contraction of the sphincters. It appears, moreover, that opium, besides its action on the muscular portion of the canal, exerts, by contact, a soothing effect upon the mucous membrane. In consequence of the diminution of the irritation of this membrane, its secretion is probably lessened, as are possibly those of the liver and pancreas. However this may be, opium acts very favorably in profuse secretion from the intestinal mucous membrane. From half a grain to three

grains may be given in the twenty-four hours, the best preparation being the *ext. opii aquosum.*

If opium or morphia do not suffice, it must be aided by astringent remedies, by far the best of which, and the most easily supported, is the sulphas zinci. One would have supposed that tannin in its separate state would have proved more useful than the zinc, but this is not the case, and it is much less easily borne. It acts much better and more energetically when employed as a household remedy (*e. g.*, as a decoction of sloe or wild pear tree) than in its separated form; and is then of great service in practice among the poor. Alum is of no use whatever in diarrhœa. Lead approaches zinc in efficacy, but still it is less certain than it. The dose should not be greater than a quarter of a grain, and this may be repeated every two or three hours, and at most every hour. If these means do not suffice, we must have recourse to enemata of salep or starch (with which may be combined one grain of opium or half a grain of zinc), not throwing up more than two ounces at a time. If the clyster does not cause pain in the rectum, and the disease continues obstinate, the dose of the zinc may be increased to two grains. Tannin may be added to the enema, but the zinc is far more serviceable. In the most obstinate cases we must have recourse to cauterization; but this is only the case when there is a diseased condition of the lower part of the rectum. Very obstinate cases of blennorrhœa confined to the anus may be completely cured by the application of nitrate of silver in substance as high as it can be passed. The injection of a strong solution of this substance does not usually attain the same end.—*Med. Times and Gaz.*, Sept. 12, 1863, from *Wien Allgem. Med. Zeit.*, No. 43.

Diphtheria.

Dr. J. West Walker presents (*British Med. Journ.*, May 16, 1863) some interesting views relative to this disease which are worthy of consideration. He maintains that the true *nature* of diphtheria must be very different from that hitherto received. "We can no longer," he remarks, "consider it to be an acute specific disease, having uniform general and local symptoms. The leather like formation, hitherto held to be the diagnostic sign, at once loses its significance, if it have to be viewed only in the light of a complication of nearly every ill that flesh is heir to; manifesting itself, it is true, only at certain seasons, such seasons being noted for the extensive prevalence of zymotic diseases generally." He does not deny "that, during a diphtheritic epidemic, a distinct, and, to a certain extent, new zymotic disease may possibly exist, to which the name diphtheria may, though rather inaptly, be applied; all I maintain is, that if such a disease do exist, we have no positive symptom by which to recognize it; and that, as far as

its general symptoms go, they only represent a condition of blood-poison analogous to, though possibly increased in severity over, diseases already known—presenting differences of degree more than of kind; and that the so-called local pathognomonic formation associated, as it is found to be, with an endless variety of general symptoms, can no longer be employed as a diagnostic sign."

"If, then," he adds, "a variety of general diseases, alike only in having the common diphtheritic complication, are any longer to be considered as one distinct disease to be called diphtheria, the sooner, for all practical purposes, the name be done away with the better, for it cannot but mislead. It conveys not the slightest notion of the true nature of the affection (or affections); and it renders utterly nugatory all attempts to reduce either diagnosis, prognosis, the question of contagion, or the method of treatment, to a scientific basis. Far better would it be to employ the word in all and every case generally, no matter what the general symptoms may be, wherein the pathogomonic sign presents itself, only reducing it to the rank of a qualifying adjective. We should then speak of cases as diphtheritic, whatever the general symptoms showed the patient to be at the time laboring under. We should be induced to study more closely such coexisting malady, and not being led away by a name, be more likely to form a correct idea of any particular case."

The *theory* of the nature of diphtheria, to be induced from the foregoing facts and observations, may be briefly stated in the following conclusions, viz.:

1. The characteristic formation is but an external complication, and has no specific relation to any particular state of system.

2. The general symptoms with which this formation is found to be associated are most various; ranging from the most trifling *malaise* to the most virulent septicæmia, and extending through the whole class of acute specific diseases.

3. Possibly, during the prevalence of a diphtheritic epidemic, there may be a distinct general disease, altogether different from other known diseases; but we have no positive evidence on the subject.

4. Diphtheria, in the sense in which the word has hitherto been employed, is to be looked upon not as one disease, but rather as many diseases alike only in being associated with the common characteristic formation.—*Amer. Jour. Med. Sciences.*

Senile Dementia.—At the end of an elaborate memoir on senile dementia and its difference from general paralysis of the insane, M. Marcé, of the Bicêtre, gives the following conclusions: 1. Senile dementia does not constitute a distinct morbid state. It is an *ensemble* of symptoms connected with various organic affections of the brain, and especially with apoplexy and softening. 2. It con-

sists of two orders of symptoms; some affecting motor power, which is more or less abolished; others affecting the intellect, of which the principal lesion is gradual weakening, to which are superadded, as accidents, isolated delirious ideas, or maniacal or melancholic delirium. 3. The disturbances of the motor function are always explained by the existence of organic lesions in the course or at the origin of the motor fibres; while to the impairment of the intellect correspond atrophy of the cerebral convolutions, fatty infiltration and more or less complete obliteration of the capillaries, and atheromatous degeneration of the nerve-cells and tubes. 4. While it offers numerous points of contact with general paralysis, senile dementia may be distinguished from it, in the majority of cases, by clinical signs. In a pathological point of view, both these diseases offer, as a common terminal result, atrophy and fatty degeneration of the nerve-tubes and cells. But, in general paralysis, this atrophy is consecutive to a plastic exudation which, poured out around the capillaries, produces adhesion of the pia mater to the cortical substance, diminishes the calibre of the vessels which it compresses, and thereby presents an obstacle to the circulation of the blood. In senile dementia, on the other hand, the obliteration is a consequence of atheromatous deposits, which are spontaneously produced as a result of advanced age and of a diminution of the assimilative power in the capillaries. These two states, then, differ widely in their nature; one is, if not inflammatory, at least exudative in its origin; the other is an arrest of nutrition.—*Brit. Med. Journ.*, Sept. 19, 1863, from *Gazette Médicale de Paris*, 1 August, 1863.

Treatment of Delirium Tremens.

Surgeon Wm. Hanbury, in an interesting article (*Madras Quarterly Journal*, July, 1863), on the treatment of Delirium Tremens, states that "during the last few years, the cases which have come under my observation have been successfully treated by the use of stimulants (brandy and porter) in limited quantities, and concentrated nourishment during the first two or three days of the affection, followed at the end of that time by the exhibition of opium in anodyne doses at night. The small amount of that medicine, when thus administered, which generally sufficed to induce curative sleep, seemed to suggest that its use could be dispensed with, and that the disease might be left—so far as this medicine was concerned—to the efforts of nature alone, and accordingly an opportunity was taken advantage of to test by experience how far the supposition would prove correct.

"An old and very dissipated soldier, who had been previously treated in the way just indicated, suffered from delirium tremens twice subsequently, and on each of these occasions the characteristic symptoms subsided under the use of stimulants and nutritious

food, chiefly beef-tea and egg-flip. Somewhat later a sergeant, much addicted to drink, was admitted with dysentery, aggravated, if not caused by this military vice. At the end of two days the symptoms of delirium tremens became developed, and the cure was trusted to nature alone, aided by nutrients and stimulants, and again with a favorable result.

"A short time after the occurrence of the last case, I was consulted regarding the condition of a man, of very drunken habits, effected by the disease and who had taken several large doses of opium prescribed in the usual manner. He was delirious and in imminent danger of sinking. The face was collapsed and bedewed with a cold sweat, the pulse was small, rapid, and feeble, and the hands tremulous; and as some cases of cholera were under treatment in the hospital at the time, the impression suggested itself that he had already reached the collapsed stage of that disease. A little consideration, however, of the attending circumstances of the case, left no room to doubt that the prostration was due to the unfavorable action of the opium exhibited, and I recommended that its further use should be discontinued, and that brandy and porter, with nutritious diet, should be had recourse to. The effect of this change of treatment was very remarkable, and well calculated to make a deep impression. The pulse rallied, the skin became warm, active diaphoresis succeded to passive serus exudation. A tranquil manner and calm expression of countenance were substituted for nervous tremor and low delirium; and in about 30 hours after the opium was omitted, he fell into a quiet sleep and awoke, cured, at the end of ten hours.

"The injurious influence of opium, and the sufficincy of the expectant or non '*therapeutic*' treatment to effect a cure, were well demonstrated in this case, and I have been informed by the gentleman who had to do with it, that the treatment 'without opium,' was also successful in two instances which have since come under his notice.

"But though examples may thus be adduced to prove that opium can be dispensed with, it may well be supposed, in the absence of more numerous facts bearing upon the subject, that the position of a medical man who adopts an expectant treatment must, for the present, of necessity, be a more or less anxious one."

To illustrate the various and uncertain action of opium in the disease Mr. Hanbury gives an account of three different attacks in the same individual, and remarks that in the first the "remedy had no unfavorable effect when given in a single dose after the symptoms had continued three days, though it is by no means certain that the sleep which occurred at the end of fifteen hours, was due to the action of the opium. In the second, the moderate use of the medicine brought the disease, as usually happens, to a favorable termination. In the third, it utterly failed.

"And in now reviewing the facts, I have no doubt that the injurious influence of opium must be referred to the too early exhibi-

tion of the medicine, for we have seen that it was prescribed to allay irritability of the stomach two days before symptoms of delirium tremens had appeared at all; and it is by no means certain if its use had been further pressed, that the result might not have proved unfavorable. Again, with regard to the stimulants employed, it seems important to note, and especially for the benefit of those who consider them an essentiel part of the treatment, that although on the last occasion they were administered from the period of admission, yet the disease showed itself two days subsequently. It would appear indeed that the views of Dr. Pirrie and others, who hold the strange mental aberrations and nervous excitement characteristic of the affection, to be the result of toxæmia affecting chiefly the brain substance, are correct. At first sight, no doubt, it might seem that the access of the disease is the direct effect of the withdrawal of the accustomed stimulus, since it so often shows itself in hospitals, as elsewhere, two or three days after a debauch or course of dissipation; but it must be acknowledged the sequence of events in these instances admits of a different explanation, and resting apparently on physiological grounds. The facts themselves are, moreover, at variance with such a conclusion, for we know that the symptoms often immediately supervene on a state of drunkenness; and Dr. Laycock has shown that the disease may be brought to a successful issue without the use either of opium or stimulants, though the latter would obviously be necessary if the abstinence theory of its etiology were tenable.

"On the whole, then, the result of late inquiry and discussion must be assumed to be a more intimate knowledge of the real nature of the disease. There can no longer exist a doubt that the use of opium at an early period of the affection is not only contraindicated, but that nutrients and rest are more nearly concerned with its successful treatment, than the stimulants with which these remedies have been usually associated. Nor shall we be likely to fall into much error in the event of stimulants being considered necessary in any particular case, if we administer them under the guidance of those general principles which are recognized in the management of other diseases.

"Lastly, with respect to digitalis. It will have been noticed that it acted in the case last detailed, to use a common expression, like a charm, though exhibited at a very critical period of the disease; and were this its invariable effect, the treatment of the affection would doubtless be greatly reduced in simplicity, and many anxieties attending it would be removed. But instances of its unfavorable action have been cited, and it still remains to be shown what are the conditions under which it may be had recourse to with least risk of failure.

"I believe it has hitherto proved most useful when not exhibited at too early a stage of the disease, and it may probably be found, as with opium, that large doses from the first invasion of the symptoms are less safe and effectual than smaller ones given at a

later date, and after some time has been allowed for the natural evolution of the disease. Moreover, if it be true as Dr. H. Jones suggests, that digitalis exerts a tonic influence on the heart and increases the contractile force of that organ, so far from being inadmissable in the low state of nervous agitation with muttering delirium verging on coma observed in extreme cases, it should here prove especially applicable. Experience, however, must alone determine this point; but in the meantime, and before resorting to the use of digitalis, it will be considered no more than judicious to adopt means calculated to restore the powers of nature, of a kind somewhat similar to those referred to in the case which has called forth these observations."—*Amer. Jour. Med Sciences.*

On the Relation of the Circulation in the Liver to the Formation of Bile.

In order to prevent the circulation of arterial blood in the liver, M. Schiff found that in dogs and cats it was necessary to ligature all the branches of the cœliac axis, also the inferior diaphragmatic artery. After occlusion of these vessels, the secretion of bile still continues and in quantity. In several cats, Schiff tied the portal vein previous to its entering the liver. The animals did not live beyond one hour and a half, and died quietly. Not a drop of bile was found in the gall-bladder, which had been previously emptied. The abdominal viscera, and especially the spleen, were congested. The experiment was repeated on rabbits with a similar result. As experementum crucis, the following is interesting. The operation of exposing the vessels was performed on a cat, but the ligature was not tightened. The animal behaved as a healthy cat ought, bile dropping freely from an artificial opening in the gall-bladder. After one hour and a half, the ligature was tightened, and twelve minutes after the animal lay on the floor as if stunned. Death occurred in fifty-five minutes. Not a drop of bile flowed after tightening of the ligature.

The second part of Schiff's researches refer to the consequences of *gradual* obliteration of the portal vein, as it has been observed in man in pathological cases, and in Oré's experiments, to have been closed without disturbance of the biliary secretion. Schiff does not doubt the correctness of Oré's experiments, but has repeated them with the view of ascertaining whether the obliterated portal circulation was not maintained in some other way. In dogs and cats Schiff continued for nearly six days gradually to tighten a ligature of the portal vein. After the final tightening, the animals died. On post-mortem examination, it was found that three groups of dilated veins communicated with the portal vein above the point of ligature, *i. e.*, with the portion connected with the liver. (1.) Small veins coming off from the veins supplying the gall-ducts and the ligaments of the liver, and in dogs these were in

connection with the veins of the stomach. (2.) A part of the veins of the gall-bladder and its ducts. (3.) A vein arising from the venous trunk formed by the crural and epigastric veins, and which receives branches from the floor of the urinary bladder, and, higher up, some from the subcutaneous abdominal veins, from the peritoneum running on the inner surface of the linea alba, empties itself into the portal vein. Schiff terms this important, though in the normal state very inconsiderable vein, the vena parumbilicalis. Bertrandi has seen in the cat communications with the splenic veins. Burrows has described them in a human fœtus, and Sappey found these communications dilated in cases of cirrhosis of the liver, and viewed them as an outlet for portal blood in disturbance of the portal circulation within the liver. Schiff regards them as of importance in the obliteration of the portal trunk, by giving admission of blood to the liver.

Schiff, therefore, does not see in the results of Oré's experiments, nor in pathological cases, any obstacle to the view that the portal vein furnishes material for the biliary secretion. In cases of congenital abnormal distribution of the portal vein, Schiff supposes that there is some compensation made by other veins, and he thinks it probable that what Kiernan, in Abernethy's case, described as a "navel vein," was the dilated vena parumbilicalis. Schiff does not, however, attach any chemical importance to the blood of the portal vein, since it has been seen that in pathological cases, as well as in experiments, the blood of the general venous circulation will suffice. He does not even consider the arterial blood as unsuitable, only it is supplied by the hepatic artery in too sparing a quantity; but, if the artery were dilated, it might compensate for obliteration of the portal vessel. It is rather, however, the province in which the blood must travel which forms the moment of chief importance, and it is in that of the portal veins that the bile is secreted. Schiff tried to prove directly that arterial blood brought into the circuit of the portal vein would maintain the secretion of bile. In three cats, he introduced the current of blood from the renal artery into the portal vein. In one of these experiments, in which the arterial blood circulated for a quarter of an hour without coagulation, Schiff believes that seventeen centigrammes of clear bile found in the gall-bladder, which had been previously emptied, were secreted during the circulation of arterial blood.—*Ed. Med. Jour.*, Oct. 1863, from *Henle u. Meissner's Bericht.*

Amygdalotomy.—M. Deroubaix cannot agree with Begin, that that this is the simplest operation in surgery, for even with instruments which render it of so much easier performance than heretofore, it still sometimes presents difficulties and danger when certain precautions are neglected. It is of importance to bear in mind that the tonsil is not an exactly defined organ, like a more perfect gland, but has a tendency to become confounded by a kind

of transition with the glanudlar systems of portions of the neighbouring mucous membranes. In the normal condition, it makes but a slight projection between the pillars of the velum; but in the case of pathological change, the two tonsils may touch each other—respiration, phonation, and deglutition becoming impeded. It is generally in predisposed subjects, as the result of repeated irritation, especially that arising from the action of cold and damp that an indurated exudation into the follicles, and a sufficiently hypertrophied condition to call for the intervention of surgery, are observed. It is rare, indeed, when the affection has reached this stage, that any local treatment will spare the necessity of an ope ration; and the author has frequently in vain had recourse to the whole train of remedies, during a prolonged period, without obtaining any diminution in the engorgement or alleviation in the symptoms. It is far better in such cases to employ the appropriate treatment, without teasing the patient by these indifferent measures. In reply to the question whether the removal of the tonsils does not give rise to serious inconvenience, it may be said that to attempt their total ablation would be to risk the perforation of the wall of the pharynx and a lesion of the carotid. In fact, a little more only than the portion which projects beyond the level of the pillars is excised; and this is done without any inconvenience, for all the follicles being independent of each other, the same consequences are not to be feared which would result in the case of a more complicated gland, the different portions of which have mutual relations with each other. Almost always, too, the cure effected is permanent; and it is only in very rare cases that the engorgement is, after some years, reproduced. If, however, by reason of faulty instruments, a mere superficial slice of the tonsil or a portion of its upper or middle part be removed, relapse will follow without much delay. It is highly important to observe, that while at the upper part the pillars of the velum oppose a continual barrier to the tonsils, nothing arrests their development below; so that their chief volume, when enlarged, lies often in this direction. But as this region is not displayed when the mouth is opened and the tongue only moderately depressed, the portion of the tonsil which is then made visible is alone removed; and a part of the diseased tissue below remaining untouched, a relapse is certain to occur. It is from having at an earlier period met with these relapses, due to incomplete operations, that M. Deroubaix turned his attention to the improvements of the instruments employed in tonsillotomy. He rejects the bistoury as not only difficult, but even dangerous in its employment. In fact, he has witnessed a case in which the carotid was fatally perforated. The amygdalotomes formerly in use all erred in consequence of the plate for the reception of the tonsil having its large diameter continuous with the axis of the instrument, while the tonsil is developed in the vertical, and therefore contrary direction. M. Deroubaix first contrived an instrument having its plate placed perpendicularly; but finding it difficult to introduce this low enough in the pharynx

to embrace all the diseased tonsil, he so changed the disposition that the plate of the instrument is not perpendicular to the handle but oblique, forming with it an open obtuse angle. This easily embraces the whole of the surface to be removed. The operation can be executed with celerity and certainty. It should never be resorted to during the inflammatory stage; for not only is it then very painful and liable to consecutive accidents, but the tissue of the gland is not firm enough to resist the traction. Although tonsillotomy is usually of easy execution, great difficulty is sometimes produced by the terror or indocility of the patient. This is often only to be overcome by prolonged waiting and watching for the opportunity which the patient, by opening his mouth, at last gives of seizing the tonsil with promptitude. Sometimes a patient who has submitted to the removal of one tonsil, obstinately refuses to allow of the second being removed. Such a case is best met by having two tonsillotomes ready. Immediately that the first tonsil has been excised, almost before the patient is aware of it, the second instrument may be applied. When the conformation of the mouth renders the isthmus difficult of access, it is preferable to depress the tongue by means of the amygdalotome itself, than to employ any special instrument for depressing it, which only complicates the operation. M. Deroubaix has never met with hemorrhage after this operation that could not be controlled by a simple vinegar gargle.—*B. and F. Med.-Chir. Rev.*, Oct. 1863, from *Presse Med. Belge*, Nos. 31, 38.

Inequality in the Length of the Limbs.—Inequality in the development of the limbs, arising from certain occupations, has hitherto been most generally noticed as it affects the upper compared with the lower limbs, as in bakers and dancers; but it also occurs between similar limbs, especially the arms, in cases where one of these limbs is actively employed, while the other remains in a more or less complete state of inaction. This inequality Dr. DUPARCQUE observes, affects the length as well as the volume of the arms, and arises from two sources, viz: the predominant development of the exercised limb; and a kind of arrest of development in that which is condemned to inactivity. In some cases, as in jewelers, cutlers, and smiths, the right arm is lengthened, while the size of the left arm is increased in painters on porcelain. This abnormal development can only occur in subjects who have followed their occupations from an early age—before puberty or at its commencement, when the body is not yet fully developed. This inequality between similar and parallel limbs is regarded by Dr. Duparcque as of some surgical importance. The neglect or ignorance of its occurrence may produce mischeivous results in diagnosis, in prognosis, and in operative proceedures in those cases of injury, such as dislocation in fracture, in which an alteration

in length from an important feature. As a general rule, Dr. Duparque says, in all cases of injury of the upper limbs from direct or indirect violence, capable of producing fracture or dislocation, the occupation of the patient, and its influence on the development of the limbs, should be inquired into.—*Brit. Med. Journ.*, Ap. 25, 1863, from *Gaz. des Hop.*, 7 March, 1863.

Bichromate of Potassa as a Poison —One of the most important papers on toxicology published within the last few years is by MM. A. Chevalier and Dr. Becourt, on bichromate of potassa. The report of these investigators, though not official, is of great public, not less than scientific interest. It conveyes to us a series of new facts in regard to a particular poisonous salt, and it proves that the effects of this poison tell upon certain branches of industry, producing wholesale mischief.

By an accident, one of the reporters met with a man who was engaged in a manufactory of chromate of potassia, and who was suffering from a peculiar ulceration of the face; from this case they obtained an idea that the manufacture was attended with serious mischiefs, but they failed to obtain from the man any very satisfactory evidence.

At last, from the director of a manufactory at Graville, they obtained a series of facts from which they learned that the workers were subjected to disease. In transforming the neutural chromate of potassa by means of acid into bichromate, the vapour arising carries with it an infinity of pulverized molecules of the product, which spread through the workshop. The cloud of particles is easily visible in a ray of sunlight. The molecules, inspired in abundance, give to the palate a bitter and very disagreeable taste; but as profuse salivation is the result, the chromate is thrown off in the saliva, and has not time to inflict any permanent injury. If, however, the respiration be made by the nose, the molecules are dissolved in the layer of secretion which lies on the membrane of the septum of the nose, creating a violent pricking, suffusion of tears, and irresistible sneezing. In time the membrane begins to be thrown off, and portions of it are carried into the handkerchief, used in blowing the nose; this process goes on, when once started, so rapidly that after a period of six or eight days the septum becomes thin, permeated with openings, and is ultimately detached altogether. At this point, all the symptoms that have been described cease, and the workmen scarcely notice the loss of the nasal partition.

The reporters state that this process of ulceration of the septum of the nose occurs in every workman, except in those who take snuff. In these, owing to the layer of powdered tobacco which covers the membrane, and the frequent use of the handkerchief, the evil is removed, or rather prevented.

On the skin in its normal state, the epidermis being intact, the bichromate exerts no baneful influence; the hand may in fact be plunged into a concentrated and hot solution of the salt, without fear; the hand may also remain covered with the salt for an entire day, without any observed effect; but if the skin is torn or abraded, however triflingly—by the prick of a pin, for example—a sharp pain is felt on the exposure; and if the salt be left in contact with the wound, the caustic character of the salt is brought out intensely, the cutaneous tissue is decomposed, and violent inflammation is established. These symptoms are accompanied with intense pain, especially in winter, when the cold is severe; the action of the salt does not cease until the cauterization has penetrated to the bone.

When a workman is clean and careful, he prevents these accidents; but if he is careless, and allows the bichromate, either in powder or solution, to touch abraded parts or sores, or wounded surfaces, he must immediately use remedial measures, or suffer a severe penalty. In some cases, where the workmen are too lightly clad, they are attacked with violent itchings, followed by supuration and ulceration of the moist surface of the penis, around the glans. This condition may progress until a disorder not unlike syphilitic ulceration may be presented.

The effects of the bichromate are shown on inferior animals as well as man. Horses employed in the manufactory, and which walk over the salt, are attacked in the feet; the hoof falls off, the inflammation extends to the upper part of the leg, causing the hair to fall off, even to complete denudation. From a series of facts related to the reporters by M. Clouet, a manufacturer at Havre, some important particulars are supplied. A horse employed in carrying the bichromate was attacked in one of his hind feet. The wound became so painful as to necessitate absolute rest; the master of the horse not understanding the treatment, the suppuration went on, extending through the limbs, the skin of two legs fell off, and an enormous suppurated surface invaded the almost entire half of the body of the animal. Death occurred a month after the commencement of the malady. The writer remarks that it is as though, when the decomposition had commenced, it went on indefinitely; there is a veritable metamorphosis of the cutaneous tissues and of the flesh altogether, analogous to fermentative action.

Dogs and cats are also subject to similar accidents from the bichromate. These animals, from walking amongst the refuse of the manufactory, are frequently affected; the skin of their feet becomes laid bare, and suppuration follows. In one instance, a rat, killed in a manufactory, was found to have all his feet suppurating, and partially destroyed, as if gnawed.

M. Clouet—to whom, as we have said, the report is much indebted—supplied also to the authors certain facts relating to the internal exhibition of the bichromate of potassa. He says that in a small dose, a few centigrammes, it acts as a purgative; if in

larger doses, say of one gramme, it acts as a poison. In larger doses, it produces colic and purging, but no vomiting. In one manufactory, certain of the workmen placed some bichromate of potassa in a barrel of cider, as a joke. The cider was rendered of a dark colour; but, notwithstanding, other of the workmen drank the cider, and were all affected with severe colic and diarrhœa.

In a second account sent to the reporters by M. Clouet, the facts of his previous statements were confirmed, and certain further details were offered, which are of interest. Thus it was shown that both sexes were equally influenced, and at all ages; and that the affection of the septum of the nostril usually made its appearance within a week after exposure. The disease of the septum was very easily brought about in those workmen who, having stained their fingers with the chromate, put them into the nostril. M. Clouet also observed in every case, that in those men in whom the septum was entirely removed, nasal catarrh was unknown.

In respect to treatment, various observations have been carried out. As a preventive of the nasal disease, the use of snuff seems very effectual. In some cases the workmen apply a wet sponge before the nostrils when they are exposed to the vapor; and the plan seems to be advantageous. When the skin is abraded, and the chromate has produced ulceration, it is the best treatment to wash thoroughly with a feeble alkaline water; then, if inflammatory action follows, to poultice, and afterwards to apply freely subacetate of lead in solution.—*Brit. and For. Med.-Chirurg. Rev.*, Oct. 1863, from *Annales d'Hygiène Publique*, July, 1863.

Poisoning by Cyanide of Potassium. Dangers to Photographers.—Dr. Davanne directs attention to the dangers to which those who are engaged in the art of photography are exposed. They use constantly, he says, two of the most active poisons—namely, cyanide of potassium and bichloride of mercury. Their hands are constantly in contact with strong solutions of these poisons; and often, in spite of repeated warnings, they run absurd risks. The author gives an account of a case in which a gentleman, who had stained his hand with nitrate of silver, endeavored to remove the stain by rubbing over it cyanide of potassium freely. In the act, he slid under the nail of one of his fingers a small portion of the cyanide salt. At first he did not notice this, but in a little time he felt a sharp pain in the part, followed, after a few minutes, by an intense vertigo, so that all objects appeared to be moving around him. To relieve him promptly, he conceived the unfortunate idea of employing vinegar; the cyanide was quickly decomposed, and hydrocyanic acid was produced absolutely. The vertigo now increased accompanied by shiverings, pallor of the face, loss of sight, and great exhaustion. The power of speech was lost, but the intelligence was preserved. The extremities were cold, and as the

sight returned there was double vision. The symptoms did not pass away for ten hours.

The treatment adopted consisted of cold and friction on the spinal column, inhalation of ammonia vapor, and the administration of strong infusion of black coffee.—*Ibid.*, from *Canstatt's Jahresb.*, 1862.

Rectification of Face Presentation under Chloroform.—Mr. W. S. Carmichael read before the Obstetrical Society of Edinburgh (April 29, 1863), the following communication: I attended Mrs. —— with her first child. On examination, the membranes were found entire, and the presentation not easily to be recognized. I suspected either face or breech. The labor was tedious. I left the patient for some time, and on my return found the membranes ruptured, and the face presenting. Mrs. ——'s general configuration, and examination *per vaginam*, by which I had found the pelvis narrow, with a hard projecting coccyx, led me to infer a tedious labor, dangerous at least to the child, if not to the mother. I therefore put her deeply under the influence of chloroform, and finding that I could without difficulty push the head above the brim of the pelvis, I was enabled to rectify the presentation. The labor thereafter was very tedious (in all 36 hours), so much so, that I had sent for the forceps; but, after waiting some time longer, delivery was accomplished naturally. The nose and both eyes clearly showed the presentation of the face. The urine required to be drawn off for a week, showing the great pressure exercised on the urethra, principally from the projection of the coccyx pressing the head against it. I think the case instructive, as showing that, by the use of chloroform, *administered deeply*, a presentation, rendering labor always tedious, and therefore dangerous to the mother, and of increased danger to the child, may by such means be safely rectified.

Professor Simpson remarked, that Dr. Carmichael's communication was a very important one. Rectification of face presentations had been the subject of a good deal of discussion at various times. We were taught by some authorities that face presentations could be readily converted, within the pelvic cavity, into head presentations, but it had subsequently been thought impossible as a general rule to do this, the mass turned (viz., the head of the child) being larger in one of its diameters than the pelvic cavity in which it was proposed to turn it. There were rare cases where nature had rectified the position. Dr. S. saw one such case some time ago, with Dr. Paterson of Leith. He (Dr. S.) remembered of once rectifying the position of the head, with Dr. Beilby, before the days of chloroform, when it would have been impossible to have finished the labor before changing the presentation. In that case the head was not descended into the pelvic cavity. Usually, for the reason stated, it is impossible to turn the head in the cavity of the pelvis;

you must first push it up to the brim before this can be done.—*Ed. Med. Journ.*, Sept. 1863.

New Cause of Unavoidable Hemorrhage.—Dr. Bryce, of Dalkeith, made the following communication to the Obstetrical Society of Edinburgh (June 10, 1863): "On the 4th of June, 1858, M. D. was delivered of her first child—a healthy, well developed boy—at the full term of utero-gestation, but did not again become pregnant till the first week of January, 1862. On the 11th of June following—that is, about the fifth month and a half—abortion took place; and, after delivery, it was found that the predisposing cause of the accident had been fatty degeneration of the placenta. Her husband was from home from the above date till the 2d of August of the same year, on which date he returned for two or three days, when she again became pregnant. On both of these two last occasions, she states that she never felt so well as during her first pregnancy. At six o'clock P.M. on the 11th of last January, almost to a day the time of her former premature labor, I was again summoned to see her, when she stated that she first began to complain at four o'clock the same morning. On examination, I found the os considerably dilated, and a large bag of thick membranes presenting, and through them I could with difficulty trace the outlines of a foot. The pains had almost entirely ceased for an hour or two; and as there was no hemorrhage (and had been none), I thought it advisable to delay interference for a short time. After allowing what I considered to be sufficient time, without any signs of improvement, I ruptured the membranes, and in a few minutes the uterus again took on action, the pains recurred regularly, and with every uterine contraction hemorrhage, which entirely ceased during the intervals. A careful examination convincing me that no portion of the placenta was attached to the cervix, and being unwilling to interfere so long as the hemorrhage, though considerable, was not alarming, and so long as I was in total ignorance of the cause of the bleeding, I tried what effect the plug might have in arresting the flow of blood. The pains soon increasing in strength, the descent of the fœtus partially expelled the plug, which I then removed altogether. I examined again, and could now reach the pelvis, where I found the cord, which I was now able to trace, passing downward from its umbilical origin, over the perineum, and up the back to its placental attachment, and rendered so tense by the descent of the fœtus, that I concluded that it was preternaturally short. The child was thus ascertained to be sitting astride the cord.

"Seeing now that the forcible separation of the placenta produced by the traction on the cord, in the descent of the fœtus during each pain, was the cause of this unavoidable hemorrhage, I proceeded during an interval to rectify this abnormal position of the child; and this I with some difficulty succeeded in doing, by flex-

ing the right thigh on the abdomen, and passing the cord over it. The hemorrhage was thus completely arrested, and, with a few more pains, the fœtus was expelled at seven P.M., followed, after the lapse of ten minutes, by a fatty battledore placenta. An over-active attendant had the placenta destroyed before I could get the cord accurately measured; but, from a rough guess, I think the total length of the cord would be about eight inches.

"In consequence of special circumstances, such as seldom come under our notice, and one of which has been already mentioned, the time of impregnation can in both cases be fixed almost to a day; in the first case, to the 2d or 3d of January, 1862, and, in the second case, to the 2d or 3d of August; and in both instances the abortion took place almost exactly at the same period of utero-gestation, or about the eighth or ninth day of the sixth month."—*Ed. Med. Journ.*, Oct. 1863.

Diphtheritic Affection of the Mucous Membrane of the Uterus after Delivery—Different Local Complications in Puerperal Fever.—Dr. Alex. R. Simpson showed to the Edinburgh Obstetrical Society (May 13, 1863) a preparation of a uterus which had been sent him by his friend Dr. Yellowlees, senior assistant in the Morningside Asylum. The patient from whom the preparation had been obtained had been sent into the Asylum as a case of puerperal insanity; but her disease showed itself to be a form of puerperal fever, under which she succumbed a day or two after her admission. At the post-mortem examination, the organs had for the most part been found healthy, but the uterus presented on its inner surface a number of diphtheritic patches, which were very marked at the site of the placenta, especially at points where there were some small placental masses remaining attached to the uterus. Different local complications, as they were all aware, were liable to occur in different epidemics of puerperal fever, or even at different periods of the same epidemic. In Berlin, five years ago, he (Dr. A. R. S.) had had an opportunity of witnessing the post-mortem examination of a great many patients who died of puerperal fever during a lengthened epidemic, and of noticing how a series of them presented morbid appearances which were mainly confined to the peritoneum; and then for a time the cases would nearly all show no peritonitis, but affections of the vascular system, perhaps with secondary deposits in the lungs or other organs; whilst a third set would present chiefly morbid changes in the lymphatics and cellular tissue beside the uterus. In other rarer cases, again, no morbid change was discovered until the uterus was cut into, when, as in the case before them, a series of dingy-gray sloughy patches were seen on the inner surface of the organ; although this form of puerperal affection was sometimes found associated with some of the other local complications. In cases where the interior of the uterus had become the seat of such diphtheritic deposits, any

lacerations of the vaginal canal that might have occurred during labor were usually found to present the same gangrenous appearance.—*Ed. Med. Journ.*, Oct. 1863.

Treatment of Carbuncle.

Mr. Augustin Pritchard, in his address on Surgery at the last annual meeting of the British Medical Association at Bristol, presented some interesting practical remarks on this subject, and strongly urged the superiority of caustic to incisions.

"When we consider," he says, "that nearly *sixteen hundred* deaths occurred [in England] in nine years, and that they amounted to three hundred in one single year, and that the vast majority of these were adult men but little beyond the prime of life, and that if the disease had been early and properly treated most of them might have been saved, we must admit that the subject is one of high importance, and not unworthy of the consideration of our Society, made up as it is of practical and busy men. To say that with an altered plan of treatment none would die, would be to borrow the words of the quacks and advertising doctors, real or pretended; and with them I have no desire to be classed.

"It seems to be accepted by all who have written on the subject, that when the carbuncle has once formed, it cannot be cured without giving exit to a slough or core; and the indications are, therefore, to stop the progress of the complaint, and to expedite the separation of the dead tissue. In a work on surgery, called *Several Chirurgical Treatises*, published in 1676, by Richard Wiseman, Sergeant-Chirurgeon to King Charles II., to whose most sacred majesty he dedicated his 'Chirurgical Labors,' the author says that too much bleeding is to be avoided, that incision may be made, and this is the particular treatment which he recommends; but he adds that some surgeons advise caustics, or the actual cautery.

"Another writer of the seventeenth century, Lazarus Riviera, who published a series of surgical cases, strongly recommended caustics.

"For the last fifty years the approved treatment has been by what is called the crucial incision, which is to be made boldly and freely through all the indurated tissues, across from one edge of the red circumference to the other, and again at right angles, so as to free the slough and destroy the inflammation; and it must be allowed, that, in the great majority of cases, this plan has been successful. Other means have, from time to time, been recommended, and some very recently, viz: no incision, but poultices, or iodine (Dr. Rigby, *Med. Times and Gazette*, vol. ii., 1858); or turpentine (Theilman, Berlin, *Med. Times and Gazette*, Sept. 29, 1855); or belladonna (Mr. Cooke, *Med. Times and Gazette*, Sept. 29, 1855); or white paint, or a cupping-glass, or watery extract of opium (Mr. Shillitoe, *Med. Times and Gazette*, vol. i., 1858); or

opium plaster (Gutzeit, *Dublin Hospital Gazette*, April 1, 1859); or subcutaneous incisions (Mr. French, *British Med. Journal*, vol. ii., 1862, p. 52); or lead plaster (Mr. Hunt, *Association Med. Journal*, July, 1853); or acid nitrate of mercury (Mr. Startin); or some other novelty, none of which have, I believe, survived the period of their first publication in the journals.

"The caustic plan has been revived, and with the sanction of well-known surgical names. Dr. Physick, of Philadelphia, seems to have been the first to bring it once more prominently before the profession; and in May, 1857, the present Mr. B. Travers published (*Lancet*, vol. i., 1857) two or three very interesting and convincing papers on the subject, and it was then that my attention was first drawn to the caustic treatment, before which time I had invariably marked a deep cross on the carbuncles, as my neighbors did. In November, 1856, Mr. Higginbottom published (*Lancet*, vol. ii., 1856) a short but very comprehensive article, recommending a plan very similar to that which I am about to advocate. Mr. Syme, on the other side of the question, says, in his ordinary very distinct mode of expression, 'the application of caustic is the extreme of absurdity.'

"I must, at this point, proclaim myself an unflinching advocate of the caustic plan of treatment in a slightly modified form, and a strenuous opponent of the crucial incision. The caustic to be preferred is the stick of potassa fusa, and it is to be used freely but carefully in the following way. In whatever stage the carbuncle is, the potash is to be applied and rubbed in freely in the centre, until an eschar is fully formed. In the earlier stages, if the skin is still unbroken, it must be used for several minutes, until the death of the central portion is insured, and the size of the slough to be made varies of course according to the size of the carbuncle. In general terms, the diameter of the skin to be destroyed should be a fourth, or even a third, of the diameter of the indurated or inflamed mass. This is generally sufficient to stop the progress of the disease; but it is far better, at the same time, to use some application of an opposite nature to the circumference, and for this purpose the nitrate of silver in substance, or in strong solution of two scruples to an ounce, may be used, according to Mr. Higginbottom's plan, or, as I prefer it, a strong solution of iodine in collodion, which has a very excellent effect in destroying the erysipelatous element of the disease. I believe that my father was the first to use a strong tincture of iodine for erysipelas of the head and face; and the *pigmentum iodinii* of the Bristol Royal Infirmary, made by the solution of forty grains of iodine in an ounce of rectified spirit, has now come into general use in such cases.

"We have lately added to our Pharmacopœia here a '*Pigmentum iodinii c. collodio*,' made with a scruple each of iodine and iodide of potassium to the ounce of collodion, and with very favorable results, for erysipelas, whether idiopathic or following surgical operations; with the exception that, if used on the face, the eye-

lids must be left intact, for it causes so much contraction of the surface, that there is danger lest the patient should not be able to shut his eyes afterward, and this accident I have seen before now.

"Mr. Higginbottom, in his paper quoted above, speaks most truly of the nitrate of silver as a preservative, and the potash as a destructive agent, and seems to have found, as I have, that this fact is not sufficiently recognized or appreciated. The contraction of the collodion film acts very beneficially on the capillaries of the skin, and the particular effect of the iodine is more continued, because of the mechanical adhesion of the collodion to the surface. With this pigment the indurated part is to be painted daily, without waiting for the first layer to come away, and the relief from it after the use of the potash is very marked. Poultices are to be avoided altogether. A dressing of the resin ointment, mixed with an additional quantity of turpentine or some camphorated spirits, is to be used daily over the surface, and in most cases no change need be made until the patient is cured.

"The other points in the treatment are the greatest attention to cleanliness in the dressings, and the removal of the discharges, which are easily insured by warm bathing and cotton wool; and the strictest care is necessary not to interfere with the slough by any dragging or cutting, so as to cause an effusion of blood.

"To a carbuncle which has begun to slough by the central apertures, the caustic is to be applied in the same way, and the effect is to turn the sloughing skin into a gelatinous black mass, which melts away and is gradually removed with the dressings, the iodized collodion pigment being applied around the circumference as before. By this plan of treatment the slough certainly separates earlier than by the incision, and comes away in a half dissolved state; and the disease being checked at the margin, contraction of the entire sore goes on from the granulating process within, frequently for many days before the more solid part of the eschar has been quite thrown off from the living tissues.

"The chief advantages which we claim for this plan of treatment, as contrasted with the incision, are two in number, viz: firstly, and principally, the safety of the patient; and, secondly, the rapidity of the cure.

"1. *The patient's safety;* the proofs of which we may conveniently examine under the same heads as those used before in describing the perils of the disease, or the causes of mortality. The risk of hemorrhage, from which some patients die, is altogether done away with. At the time of the application of the caustic, when the skin is beginning to slough, a few drops of blood escape sometimes, but they are at once dissolved by the caustic, and this is the only blood shed in the progress of the case; and, if the potash is applied still earlier in the treatment, not one drop is lost, and this is no slight advantage.

"Exhaustion, as a cause of death, is rendered much less probable, partly because no blood is lost, but principally because we

imitate and support nature's effort by making an artificial slough, of comparatively small size, and the suppuration is only what is required for the separation of the dead skin and cellular membrane, the further secretion being very much lessened by the early loosening of the slough and the application of the iodine paint.

"Thirdly, I believe that pyæmia or purulent infection, the most frequent cause of death and the most hopeless complication, will not occur by this method of treating the disease.

"I have already stated my conviction that pus finds its way into the open mouths of the divided vessels, and thus the system is contaminated. A cut through the hard, brawny tissues must leave many vessels held open mechanically, in the midst of the suppurating and sloughing membranes, in the state of all others best adapted to cause the entrance of the poison.

"The only two fatal cases of carbuncle which I have been ever called to, were of this nature. Both were clergymen, middle-aged, well nourished, and in fair health at first; and in both the treatment had been by incision. In one the sloughing process had never been completed; in the other the wound had even healed, and become firm, and the patient sank from numerous extensive formations of pus in the joints and cellular membrane, in various parts of the body.

"A medical friend of very large experience in India, where the natives, soldiers, and others, were always under his care, and where carbuncle is a very common disease, informed me some years ago that he had long given up the incision because of the mortality from pyæmia, and that his treatment has been much more successful since.

"Seiche treated eleven patients in the ordinary way with incision, and six died; five of them from pyæmia. He treated twelve with collodion, and all recovered.*

"The risk of death by the extension of the inflammation to the deeper and more important structures of the body, or by tetanus, is nearly the same whatever plan of treatment is adopted; but these dangers are not great, because of the extreme rareness of these accidental complications. Whatever difference there is, must be in favor of the caustic method, because the slough is more speedily loosened.

"2. *The Rapidity of the Cure.*—The second advantage which I claim for the caustic, viz: shortening of the time required for the cure, although not equal in importance to the safety of the patient's life, is nevertheless no slight one. It is not quite so easily capable of absolute proof; but I have as little doubt about it as about the others.

"The explanation of the case is sufficiently easy. Important time is saved at first, because the slough is formed more quickly

* Year-Book of Medicine and Surgery, 1862, page 165. The mortality was excessive according to this statement: six dying out of twenty-three. The more application of collodion seems an inefficient remedy.

A cut will let free the tissues, and check the inflammation and the progress of the disease at the circumference; but whether the skin has sloughed already or not, the central part will, in almost every instance, die, and have to come away; and the special chemical effect of strong caustic alkali upon the tissues of the part, in whatever state they may be, whether living or dead, saves the patient's time in another way. As I have before noticed, the potash is a powerful solvent of the tissues: pus, blood, and the gelatine of the skin and the fat, are liquefied and dissolved by it, if used in the concentrated form of potassa fusa; and the slough already formed and the skin which is about to give way become semifluid, and are washed away with the secretion; the solid elements remaining being the white and yellow fibre of the skin and areolar tissue, with pus, coagulated lymph, and some of the cellular membrane and fat which the caustic has not been able to reach.

"It is important to remember that the action of the remedy upon the part to which it is applied, is chemical entirely; and that the good effect upon the rest of the disease is from the early formation of a slough which is easily broken down in its substance.

"The resulting sore is undoubtedly much smaller by this treatment. After incision, the quadrants of skin partly slough, and are partly retracted, so that ultimately the sore is circular, with a diameter of the length of the cuts; whereas by the potash and iodine plan the centre gives way, and all the rest of the skin retains its vitality and its former position; and even though the edges appear at first to be undermined, by the time the slough has come away the greater part is generally filled up by granulations; and, as I have before said, contraction of the whole sore has commenced.

"To complete my remarks, I must shortly allude to the general treatment. The indiscriminate use of stimulating food and drink is to be avoided. Some gentle aperients are required at first; and afterwards the medicine best suited for the majority of cases, is a mixture of ten grains of chlorate of potash with ten minims of the tincture of the sesquichloride of iron. Food in a nutritious and fluid form is required, and occasionally wine or beer, if the discharge is very free, and the pulse seems to require it; and if there is much weakness with sweating, quinine and acid, and perhaps an opiate at night.

"Mr. Higginbottom, whose name deserves all honor, for he is a stanch and honest opponent of the vices of the alcoholic treatment, makes the remarkable and very satisfactory statement that he has never prescribed alcohol in any form for this malady, and that he never saw a fatal case.

"The question of pain will arise, and may with some be an element in the determination as to the plan of treatment; but it has no weight at all compared with the question of the patient's safety. When a large surface is touched with the caustic freely, there is sometimes much pain; but in those cases a long incision would be necessary, and patients dread the caustic much less than the knife;

and I have used the freezing mixture of pounded ice and salt, applied for five minutes to the surface, with the effect of almost destroying the feeling without interfering with the chemical action of the alkali. The advantage in this respect is all in favor of the caustic; and the freedom from pain which the patient experiences, as soon as the first burning has passed, is very marked.

"I have introduced no accounts of cases, although I have treated many in each way; for their usual progress may be satisfactorily described in general terms.

"In conclusion: Although the plan is not new, and although it has been urged, as I have before said, by higher names than my own, and although its advantages are so striking and intelligible, it is very clear that the idea has not taken root effectually, as it ought to have done; and no opportunity could offer itself more likely to bring it prominently before the profession, than that which I now take of making it the subject of the surgical address before this assembly."—*British Med. Journal*, Aug. 8, 1863.

Effects of Emerald Green on Paper-Stainers.—The commissioners appointed to inquire into the health of children in manufactories have published some valuable remarks on the effects of arsenical preparations on the paper-stainers. The commissioners state that the coloring matter consists sometimes of emerald green, in greater or less proportions; and when it does so, it becomes, under certain circumstances, a source of danger. The evidence of Dr. Letheby on this subject is particularly deserving of notice, as showing not only the danger to the workpeople, but to persons whose rooms are hung with these arsenical papers, and to those who wear artificial flowers similarly colored. Dr. Letheby relates a fatal case of a child who was thus poisoned from playing in a room in a gentleman's house which was covered with this green paper. He also states, as showing the amount of arsenical matter, that he has found about a grain of pigment for every square inch of the green leaves of these flowers; adding, "I have seen a wreath with enough arsenic in it to poison twenty people."

The commissioners add—The emerald green is dangerous in this trade.

1st. If it is badly manufactured. Mr. Cook states, "Our emerald green is peculiar. It comes from one particular place in London. It is much finer and softer to the touch—less granular, that is—than the ordinary Scheele's green, of which this is a specimen. It does occasionally vary in quality; but as a general rule, if ever we have to get some from any where else, our men know by the strong smell directly they open the cask that it 'won't work,' as they say—that is, that it will be loose and fly;" and Mr. Cook adds that brushing emerald greens by a machine, "if it were at all loose, must be very bad."

Mr. Smith, of Messrs. Heywoods', states that "the arsenic green is better than it used to be;" and other witnesses also are of the same opinion, that if it is well manufactured "no bad effects arise from it." It is the cheapest kind that is the most injurious. "The commoner the color—the cheaper, that is—the worse for use. It is not properly prepared; the arsenic is not killed in it."

2d. If it is imperfectly mixed with the size. It appears that this is more likely to be the case with machine-made paper than in block-printing, inasmuch as the color for block-printing is more "set with size," being worked "almost in a jelly;" whereas "the cylinder in the machine must have a more or less liquid color, or it would not revolve; and so there cannot be enough size to bind in the one as in the other."

3d. If it is worked at continuously, especially with machine-made paper; the friction in rolling it up when dry, or in brushing it, causes the dust to come off.

4th. If cleanliness be not observed. J. Nail says: "The emerald green is worse, but cleanly persons are not affected by it. The boys, many of them, will not wash; but eat their meals with dirty hands, covered with paint and mess. I have seen them eat their dinner with hands smothered in lead."

That these sources of danger, being well known in the trade, are watched, and, to a considerable extent, guarded against, is shown, not only from the above evidence, but from the facts related by several witnesses connected with the large works in the North; where the printing is chiefly by machinery, and where, consequently, the greatest danger arises from the emerald green. J. Boden, at Messrs. Heywoods' works, states that he "has never known any permanent injury from working the emerald green."

The case of a boy at Messrs. Potter's who is said to have died from the effects of emerald green, G. Aspden, is exceptional; and is, indeed, attributed by two of the witnesses, partly to detaching the chalk dust, partly to "the long hours and close confinement." —*Brit. and For. Med.-Chir. Rev.*, Oct. 1863, from *Report of Children's Employment Commission, Government Paper*, 1863.

Spotted Fever.—Dr. E. W. Jenks states (*Buffalo Med. and Surg. Journ.*, Oct. 1863), that this disease prevailed quite extensively during the past winter and spring in La Grange Co. and other portions of Northern Indiana.

The most striking characteristics of the disease, as observed by him, were the suddenness of attack, and in fatal cases, the sudden termination. "Most of the patients were attacked with a chill, following which would be the sudden occurrence of headache, mostly in posterior region of the head, with severe spinal pain, sometimes extending to the limbs. Soreness of the flesh of all parts of the body was complained of in almost every instance, so as to elicit tokens of suffering whenever the patient was moved,

even in those cases where there appeared to be almost complete stupor. In the majority of cases the head was drawn back, and no proper amount of force could bring the chin to the breast. Immediately following these symptoms, and in some cases simultaneous with them, was the characteristic eruption, which was of a dark purple color, non-elevated, and not receding upon pressure; there would also be some lighter colored spots, making a gradation of color from the dark ecchymoid spots, to those of a light red. There was no uniformity in the size of these spots, some were not larger than a pin's point, while some were one-half to three-fourths of an inch in diameter. In one case I saw, in addition to the spots I have described, several large elevated spots, of the size of a twenty-five cent piece, of very dark color, presenting outside of the dark color a blistered appearance. Dr. Fletcher, of Lima, Indiana, informed me that in several instances he observed these elevated blistered spots.

"There was sometimes vomiting in the commencement of the attack with an abhorrence of food. I neither observed or heard of any case of diarrhœa or abdominal tenderness; in every case there was obstinate constipation. The febrile symptoms varied, in the sudden fatal cases none followed the chill, but the pulse was feeble and the skin cold. In none of the cases was there a strong, full pulse, and the heat of the surface was less in all cases than is usually observed in acute diseases. Dr. George Fletcher, of Lima, Ind., with whom I saw some cases of this disease, and to whom I am indebted for an account of some of his observations, says that in one case which recovered, the patient lost permanently the use of one eye, there being complete amaurosis. In another case there was strabismus and curvature of the spine, which continued at last accounts, several months after. In one fatal case I saw, there was swelling of the cervical and sub-maxillary glands. There was not complete delirium in any case, the tendency was more to stupor than delirium; the patients could usually be aroused so as to give intelligent answers to questions; in all fatal cases the patients died comatose.

"In one case only was I permitted a post-mortem examination. The patient, a girl aged 13, went to bed at night apparently well; getting up in the night to obtain a drink of water she suddenly lost the use of her limbs. Her parents not hearing her return to bed, got up and found her on the floor; she said she could not walk, and complained of cold, headache, and soreness of limbs. I saw her the next morning; she was lying with her head thrown back, the surface of the body was cold, and covered with the characteristic symptoms; the pulse was slow and feeble, the pupils were dilated, the bowels were neither distended or tender. She was in a state of stupor, yet when aroused would complain of severe pain in head, back and limbs. The next day there were more febrile symptoms, yet at no time as manifest as is usual in acute diseases. In this case only did I see any glandular swellings about the neck.

She remained in about the same condition until the third day, and then died comatose. Autopsy was made twelve hours after death. The brain was found very much congested, the veins being distended to their utmost capacity; there was a small amount of serum effused at the base of the brain, and there appeared to be a slightly softened condition of the upper portion of the spinal cord. The left cavities of the heart were entirely empty, while those of the right side were filled with very dark colored blood, with small amount of coagula. The dependent portions of the lungs only were congested, otherwise they had a healthy appearance. I regret that I was not allowed time to examine the abdominal viscera.

"Without giving the details of treatment in any of the cases of 'spotted fever,' I would merely say that the treatment most successful, was upon the sustaining plan, viz., brandy, quinine, beef tea, and tinct. ferri mur.

"The mortality of spotted fever was very great; in the majority of fatal cases they were speedily fatal; the commencement of the attack was the time to be watchful; those patients that lived several days were quite apt to recover, although recovery was very slow."

Toxicological Experiments with Turpentine.—A series of experiments have been conducted by Dr. L. W. Liersch, to determine the effects of turpentine on animals. Rectified turpentine was placed in a wooden chamber, and after the vapor was freely diffused through the chamber, the animals were placed in it, so much air being admitted that a light placed in the chamber would burn quietly and strongly. The following are the conclusions drawn by the experimentalist: Air, when charged strongly with turpentine vapour, was injurious to all the animals subjected to it. The symptoms excited were uneasiness, dimness, tottering, reeling, want of power in the extremities, especially the hinder ones; convulsions, partial or general; difficult respiration, and great rapidity in the action of the heart. Death was produced not merely by asphyxia, but by paralysis of the nervous system. In two animals, a cat and a rabbit, death followed in the course of half an hour; while other animals, exposed to the same vapor in the chamber, recovered on being brought into the air. At the post-mortem, conducted within an hour after death of the two animals, the bodies were rigid, the vessels of the brain were found full of dark fluid blood. In the cat, the pupils were enormously dilated; in the rabbit, shortly before death, they were much contracted. The lungs were of a deep red colour, with ecchymosed spots; the right side of the heart was relaxed, and filled with fluid blood, which in the rabbit was dark; the left breast was contracted and empty. The kidneys, liver, and spleen were full of blood; the bladder was distended, but no violet smell was perceptible in the urine. The

author infers from these experiments that turpentine vapor is not so dangerous to inhale as has generally been supposed, and that it is not necessary as a matter of police, to exclude turpentine varnish from the arts.—*Clarus in Schmidt's Jahrbücher*, Band cxvii. No. 1, 1863.

[The experiments made by Dr. Liersch confirm an observation made by a correspondent of the *Lancet*, two years ago, to the effect that turpentine administered rapidly and freely by the lungs produces results almost identical with the vapor of chloroform. Some researches of our own confirm this view. We must, nevertheless be cautious in accepting the statement that the inhalation for many hours daily of the vapor arising from turpentine varnish is not ultimately injurious to health. We have direct evidence that so inhaled it produces giddiness, deficient appetite, and extreme anæmia, and that the system never bears it with tolerance.—B. W. R.]—*B. and F. Med.-Chir. Rev.*, April, 1863.

Poisoning Properties of Thallium.—M. Lamy, announced to the French Academy of Sciences, his discovery of the deleterious properties of this metal. Having experienced certain pains, especially in his lower limbs, while pursuing his studies on thallium, he was induced to attribute them to a noxious influence of the metal; and in order to ascertain whether such was the fact, he dissolved five *grammes* of sulphate of thallium in milk and offered it to two puppies, each about two months old. But after tasting the liquid they left it, and could not be induced to take any more. On the following day the milk, which had been left in the yard, had disappeared, and it soon turned out that it had been partaken of by a dog, two hens, and six ducks; for a few hours after ingestion the dog became sad and refused to eat. During the night it was seized with violent gripes, which caused it to utter piercing cries. Its features had undergone a change; its back was bent up through the effect of pain, the seat of which was evidently in the intestines. Its hind legs, after a continuance of convulsive motions, became paralyzed, and it died sixty-four hours after taking the poison. On the day before its death a hen and six ducks died, and in those which were watched in time, the paralysis of the legs was remarked. The two puppies which had scarcely touched the milk had meanwhile shown symptoms of fatigue; by degrees they were seized with convulsive trembling, and could hardly stand; then came the acute pains which ended in death, although every precaution had been taken, apparently in good time, to save their lives. All these animals being subjected to dissection, there could not be found the slightest corrosion or even inflammation of any consequence; only the gall-bladder of the dog was found considerably distended, and in some of the ducks various serous membranes, that of the liver

especially, had assumed a whitish and granular appearance. As to the nature of the poison, if there could have been any doubt about it, it would have been at once dispelled by the characteristic green band peculiar to thallium in the spectral analysis of the organs of the dead animals. Eight days later another hen was taken ill. Its wings hung down, it could hardly walk, and when it wanted to peck its food, its neck seemed to have lost the power of bending down sufficiently, so that its beak did not reach the food. The hen was killed, and thallium found in the intestines, but in a very small dose indeed, and the other organs did not contain any. M. Lamy next administered a *decigramme* (a grain and a half,) of the sulphate to a dog two months old, and it died forty hours after taking it. Hence M. Lamy infers that sulphate of thallium is a powerful poison, producing pain in the intestines and paralysis of the lower members. This poison and the nitrate have but little taste, and might therefore be used for criminal purposes; but fortunately there is not a poison that can be traced with more certainty through spectral analysis than this. This new method of analysis bids fair to render excellent service in cases relating to forensic medicine.—*British Med. Journ.*, Sept. 26, 1863.

Improved Methods of Treatment in Deformities. By E. ANDREWS, A.M., M.D., Professor of Surgery in Chicago Medical College.

In previous articles I have figured and described several pieces of apparatus, which I use for the cure of spinal curvatures. There are numerous other appliances which are valuable adjuvants to the main treatment, among the most important of which is what the German surgeons call the "stretch-bed." This machine consists of a couch with various appliances at the head and foot for making extension and counter-extension upon the spinal column; by means of which, like a string put under tension, the curves of the spinal column are drawn gradually straight. The first successes obtained by this invention produced quite a furor in its favor in Europe; and its popularity was such as to occasion the satire, that "many seemed to imagine that nothing more was necessary to constitute an orthopedic surgeon than a stretch-bed and patients."

The extending power in this machine consists of springs or weights and pulleys, applied both at the head and the foot of the bed, the weights being preferable. The upper extenders were applied to the head, in case of high curvature, and to the shoulders when the difficulty was lower down. The lower extension was applied to the bulge of the hips or to the feet. The patient was not usually required to remain continuously in the machine, but was placed in it, at intervals, from two to four times a day; but

the more time he could spend in it, without injurious loss of exercise, the more rapid was his improvement.

Although the extravagant admiration at first felt for the stretch-bed has greatly subsided, it still remains as a very valuable instrument, which no one undertaking the treatment of spinal curvatures can afford to do without. It may be specially and elaborately constructed for hospital purposes, or be extemporized out of an ordinary bedst ad in private practice. For hospital purposes, the bedstead may be made of wood or iron. It should be not less than eight feet in length, by three and a-half in breadth. The great length is required to make space above the head, and below the feet for elastic straps and other extending appliances. There should be no head nor foot board, but instead of them a long roller of wood, three inches in diameter, extending from post to post, across the head and foot of the machine, and turning easily on iron axles. Above each roller should be a strong crossbar of wood, into which iron pulleys may be set in various positions, as the surgeon may, from time to time, desire. The mattress should be of curled hair, rather hard, and made level and smooth. Pillows and bolsters can be varied according to the necessities of the case.

For temporary use, in private practice, a stretch-bed may be improvised out of the ordinary bedstead, by cutting openings through the head and foot boards, and setting in some small cast-iron or brass pulleys, such as may be found in any hardware store.

If the deformity is in the upper portion of the spine, an extension is attached to the head, by means of a firm leather band, moulded to the occupit, and provided with two branch straps, one to cross the forehead, and the other to pass under the point of the chin. This must be very carefully constructed, or else it will be too irksome to be borne, but when well fitted, it is borne without pain. A short band passes upward from each side of the head, and attaches to a cord which is passed over the pulley and supports a weight. The counter-extension is made by a cord and weight at the foot of the bed, in a similar manner, and may be attached to the patient either by adhesive straps applied to the legs, or by a strong waist buckled around the bulge of the hips. The weights should vary from five pounds upward, according to the ability of the patient to tolerate it. If this apparatus is properly constructed and applied, the patient will enjoy free motion both of upper and lower extremities, and can turn on his back, his face, or either side, without interfering with the extension, or rising from the bed. No effort should be made to keep the patient continually on the stretch-bed, except in cases where he is unable to sit or walk. He should resort to the bed from two to four times a day, and remain from half an hour to an hour and a-half each time. The remainder of the time he should either wear a proper supporter—such as I have described in a former article—or be occupied by gymnastic exercises calculated to correct the deformity. Some patients will be able to sleep in the stretch-bed after a little

practice. In these cases they should by all means do so, as it adds the whole of the sleeping hours to the treatment, and very much hastens the recovery. If the deformity is below the sixth dorsal vertebra, the upper extension should be applied to the armpits and chest by proper pads in the axilla, and by broad adhesive straps upon the back and chest, attached to the extending cord. When properly used, the stretch-bed exerts a very powerful influence in unfolding spinal curvatures, and the worse the deformity the more striking are its results. One of the most prominent symptoms of improvement is the surprising increase of stature which the patient exhibits as the spinal column comes out to a correct line.

GYMNASTICS.

The cure of some forms of curvature of the spine, and of all anchylosed joints, is greatly promoted, and may be entirely accomplished, by proper specific exercises, either active or passive. It is almost impossible to introduce this part of the treatment fully into general practice, on account of the amount of time required to be spent with the patient, either by the surgeon, or by a trained assistant, but parts of it will be found useful to every practitioner. The exercises are active and passive, the former being executed by the patient's own muscles, and the latter by the hand of the surgeon. Thus, for instance, if the patient has a slight double lateral curvature, and he be directed to elevate the shoulder on the side of the concavity of the upper curve (usually the left,) and depress the opposite one, and to curve the spine in the direction opposite the deformity, the practitioner at the same time guiding and assisting the motion with the hands, it will be found that the spine is momentarily restored to its normal shape. If she now repeat these motions with the same assistance many times, until fatigued, every day, the muscles which are thus trained will acquire a prodigious development, and their antagonists remaining undeveloped, they gain the mastery, and by their own superior tension ultimately correct the deformity. The bones and ligaments yield slowly to the pressure, until their shapes are perfectly restored. This is the principle of Ling's Swedish "Movement Cure," which, in a debased and spoiled form, is now hawked about the country, by sundry quacks. Some additional exercises are performed in most cases. Thus a cushioned post is prepared, and set firmly in the floor, across the top of which the patient is made to lean, and by repeated efforts of the surgeon, is made many times in succession to flex the curved spine, in the direction opposite that of the deformity.

Anchylosed joints are treated by constantly repeated exercises, both active and passive, until by degrees the fibrous bands are elongated, and mobility established. A vast number of other exercises have been devised by various orthopedists, some of which are useful and some not, but the principles involved are the same throughout.

STATE OF ORTHOPEDIC SURGERY IN EUROPE.

Dr. Ling, of Stockholm, was one of the earliest lights in orthopedy. His system of treatment consisted mainly in the series of gymnastic exercises alluded to above. He gave a strong impetus to the treatment of deformities: and his institute was under the patronage of the government for forty years. Sundry rags and tatters of his ideas, under the name of the "Swedish Movement Cure," constitute the stock in trade of numerous American quacks.

Wildberger, of the Orthopedic Institute in Bamberg, mostly discards Ling's gymnastics as useless, because they are very unsuccessful in spinal diseases. This is, in a great measure, true, Ling's exercises being better adapted to diseases of the extremities than of the spine. Wildberger, on the contrary, gives most of his attention to spinal deformities, and treats them mainly by a variety of splints and supporters, which slowly and steadily force the curvatures back to a straight line. His apparatus is thorough and efficient in its action, and has the merit of allowing the patient to walk about and exercise while it is worn; but most of it is complex and clumsy in structure, being in striking contrast, in that respect, with American instruments.

Dr. Melicher, of Vienna, has an orthopedic institute, in which he does, or at least did, a few years ago, rely almost exclusively upon Ling's gymnastics.

Dr. Berend, of Berlin, has an establishment in which he treats his patients by tenotomy, or other surgical operation, when required, and by the stretch bed and other machinery, after which he completes the cures by gymnastics alone.

Dr. Schreber, of the Leipsic Orthopedic Institute, treats his patients upon a stretch-bed, of which the extending force is produced by steel springs. The bed is also provided with lateral steel springs, to press in the convexities of the curved spines. His institute is but little patronized.

Dr. Kjœlstadt, of Norway, has complex system something like the following: He first places his patient upon a stretch-bed, during certain hours. Then taking him up, he places him in a peculiar machine, in which he marches him with short steps around the room. Then laying him down, he kneads the joints and muscles with his fists, and then returns him to the stretch bed again. He is said to possess very little adaptive power, treating all kinds of cases alike.

Dr. Roth, of London, has an institute, in which he follows Ling's method, combined with the Russian bath,—that is a bath having a series of sudden alternations between hot and cold water.

Dr. Nitzsche, of Dresden, takes complete possession of his patients, occupying their whole time with curative measures, making extensive use of gymnastics and electricity. Spinal curvatures go through the following course: In the morning, he first washes the patient's back with cold water; then laying him on his face, he rubs him down with alcohol, and proceeds to knead and press the back in a systematic manner. He then practices

the sufferer on motions to straighten the spine by the action of his own muscles. Next comes a series of exercises in which the spine is stretched between rollers, and the patient is made to swing by his hands, head, &c., &c. All this is the morning lesson. In the afternoon it is repeated, and the evening is occupied with gymnastics; after which his patients are said to sleep well. If they are not cured it certainly is not for want of diligence.

Dr. Klepsch, of the Breslau Institute, uses stretch-beds, electricity, and a variety of instruments for club-feet, and other deformities.

Dr. Knorr, of Munich, takes substantially the same course, adding to it, however, a system of gymnastics and of water cure.

Dr. Parrow, of the Orthopedic Institute in Bonn, has a kind of chair constructed for straightening the spine. He also makes use of a great variety of apparatus, among which are pulleys, springs, and sundry handles pendent from the ceiling, upon which the patient practices swinging by one or both hands, as the case requires.

Drs. Ebener & Grossman, of Stutgard, regard instruments as indispensable, employing stretch-beds, corsets supporters, &c., and adding also active and passive gymnastics.

Prof. Werner, of the Gymnastic Academy of Dessau, employs corsets, supporters, stretch-beds, and baths, together with active gymnastics, but condems the passive gymnastics as useless. In this, however, he is certainly in error, as the passive movements are very often the only ones which are possible at the commencement of the treatment.

STATE OF ORTHOPEDIC SURGERY IN THE UNITED STATES

In this country, the cure of deformities is an almost completely neglected art. A few good men are zealously cultivating it in the larger Eastern cities; but in the West, it has only just began to receive attention. For this reason, the whole country is filled with neglected spinal curvatures, bent knees, uncured club-feet, and anchylosed elbows. Many of these cases are perfectly curable, even when of many years' standing, and should be at once taken in hand. The cases of spinal deformity are especially to be commiserated, because they are usually taught to look upon their state as hopeless; whereas, a large portion of them are capable of being restored to soundness and perfect form. It is the hope of the writer, that these articles may arouse the attention of our surgeons to their duty; and prevent these cases from being turned over to the maltreatment of lying, itinerant quacks.—*Chicago Med. Exam.*

The Therapeutic Properties of Bromide of Ammonium. By IRA HATCH, M.D., of Chicago.

The *London Lancet* for April, 1863, contains a notice of the bromide of ammonium.

Dr. GIBB recommends it highly in nervous affections, in diseases of the mucous membranes, and in epilepsy.

It will be recollected that in a communication to this Society, a few months ago, I expressed the opinion that remedies would yet be found that would act far more effectively as sedatives upon the mucous surfaces, than any hitherto known to the profession. If Dr. GIBB'S statement with regard to the bromide of ammonium may be relied on, or if it should be confirmed by further experience, a very important discovery, looking to this end, has already been attained. He says, that "the mucous membrane of the whole body is brought more or less under its control. Trembling, nervousness, and general uneasiness quickly subside under its use. It calms irritation, and allays nervous irritability."

Soon after this account of the bromide fell under my eye, I had some cases which I thought would test the value of the medicine.

One was a case of chronic liver complaint, of long standing, complicated with a diseased condition of the mucous membranes. The patient had had fits of indigestion, vomiting of bile, a sallow skin, and irregularity of the bowels for a long time. She had had chronic bronchial asthma for at least twenty years. She had been subject, from a child, (she is now over forty years old) to distressing turns of sick headache, with vomiting, fainting, and palpitation of the heart. During these paroxysms of headache, the dyspnœa, dizziness, blindness, and numbness were really alarming. Succeeding one of these paroxysms, she had hemiplegia, which lasted several weeks, but finally wore off under the use of counter-irritants to the spine, and the internal use of nux vomica. But it left her nervous, restless, and constantly apprehensive of another attack.

She is a married woman, but has never borne children. The catamenia have always been defective; menstruation sometimes irregular, and at other times painful or altogether wanting.

In order to allay nervous irritation, I gave her bromide of ammonium, in two grain doses, four times a-day. It promptly relieved the nervous irritation, and produced a calm quiet. She was inclined to sleep more than usual.

At present she is taking no medicine regularly. Her health is better apparently than it has been for several years. When she feels particularly nervous, she takes a dose of the bromide, which is not often necessary. I do not anticipate any very lasting benefit. There is too much organic disease to expect it. But the experiment shows the sedative properties of the remedy.

The fungous granulations of the throat and back part of the tongue have very much diminished in size and improved in appearance. But this may not have anything to do with the bromide. I may add here, that she has been greatly benefitted by the ext. nux vomica and quinine and iron, to which I mainly attribute the present improved condition of her health.

Another case in which I have used the brom. amm. was a woman thirty-nine years old, fifteen years married, but had never borne children. She is of a nervo sanguineous temperament, the latter temperament largely prevailing.

A considerable portion of the time since puberty she has been the victim of dysmenorrhœa and leucorrhœa, with occasional turns of dyspepsia. The bowels have generally been constipated. She never has been anæmic or emaciated; but her countenance has generally been indicative of health.

Last fall she became pregnant. In March, the seventh month of her pregnancy, she took hooping-cough, which ultimately produced uterine hemorrhage, followed by pains; and she was delivered of a still born child on the 3d of April last.

The labor, as well might be expected, was tedious and painful. The os uteri was somewhat rigid and excessively sensitive. The pains, though light, distressed her exceedingly. Her recovery was slow and tedious.

She lost her strength and appetite, and became very nervous. She had fits of swooning, evidently of a hysterical character. She laughed and cried in the same breath. She would not be left alone in her room for a moment. Yet there did not seem to be any adequate cause for such nervousness. There was no fever; no tenderness of the abdomen; lochia slight; and no leucorrhœa. Pulse, respiration, and skin natural.

The bowels were constipated. and every evacuation prostrated her wonderfully, and aggravated all her nervous symptoms. No hemorrhoids discoverable. At this time, with no other view than to allay nervous irritability, I prescribed

℞.—Bromide Amm..... ..... ℥ij
Syr Prun. Virg..... ..... ℥iv.

Dose, one teaspoonful every six hours.

The effect was most gratifying. A moderate leucorrhœa immediately made its appearance.

She rested well the first night and ever afterwards. She had no more fainting fits or palpitation. Her recovery, from this time, was steady, uniform, and complete. In June, she went East, where she spent the summer; and I saw no more of her till ten days ago, when I was called to visit her for another complaint.

After her sickness, which was temporary, had subsided, I investigated the old complaint, and found that she had menstruated freely, without pain, and had experienced none of her old troubles, with the exception of a slight leucorrhœa, which, on inspection by the speculum, was found to issue from the neck of the uterus, and was thick, tenacious, and transparent.

She told me in the presence of a homœopathic lady, that she had a remedy in the bromide of ammonium that would control the pain and nervousness which had tormented her so long, and for which she had never before found any relief, except by opium; and that destroyed her appetite, and generally made her sick for a week afterwards. She is an intelligent lady, and I think her testimony is worth something. She is one of the kind, too, who never have had much faith in medicines, being homœopathically inclined.

The medicine seemed to act, as a direct sedative, upon the mu-

cous membrane of the cervex uteri, much in the same manner as cleavers act upon an irritated urethra, or as buchu acts upon the bladder. It allayed the local irritation, and the constitutional symptoms disappeared.

The patient had been tormented for years with painful menstruation and uterine leuchorrhœa. The primary difficulty was located in the neck of the uterus. Dr. Tyler Smith says (what we all know to be true), that the mucous membrane of the upper portion of the neck is sometimes remarkably sensitive, and is nearly as intimately connected with the mental emotions as the lachrymal gland.

This accounts for leucorrhœa from mental excitement. The hysteria, palpitation of the heart, and other nervous symptoms of our patient were the result of the excessive irritability of the upper portion of the neck or inner sphincter, usually called the os internum. In nervous, irritable women, rendered so by uterine troubles, is not the point of irritation situated in this portion of the cervix uteri? This portion is highly organized, and is always sensitive, even in the healthy woman; made so, undoubtedly, to guard the sacred inclosure within.

A highly organized, sensitive part becomes doubly so whenever the action of such part becomes diseased. The os internum sometimes becomes very irritable in pregnancy; causing obstinate vomiting, and other distressing nervous symptoms. It would seem, sometimes, as if this part of the neck were the centre of nervous sympathy in the female. Not only the stomach but the uterus itself and the ovaries are powerfully influenced by any disturbance of this part. It is well known that a very slight but continued artificial irritation of the os internum will cause abortion. Nothing more is needed than to pass through it a smooth elastic tube, and let it remain till pains come on. In amenorrhœa, depending upon certain local causes, the tube is a sovereign remedy. In vicarious menstruation this course is certain to restore the natural menstrual flow.

Some years ago, I saw a striking exemplification of this truth, in a lady long afflicted with vicarious menstruation. Each menstrual period was preceded by the most distressing symptoms of congestion of the lungs, followed by a true catamenial secretion from the lungs (unless prevented by treatment). The patient had been many times copiously bled, and subjected to a variety of treatment. She was pale, thin, nervous, and hysterical; thus verifying the assertion of Dr. Preech, of Paris, that "in all cases of vicarious menstruation which had been carefully observed, antecedents either of hysteria, or of an exaggerated sensibility, have been noticed."

In this condition, she put herself under the care of Dr. Kibbee, of Springfield, Mass. He treated the case by introducing the tube every month; anticipating the menstrual period, generally, a day or two.

She always menstruated, per *vias naturales*, within forty-eight hours after the initoduction of the tube. She eventually recovered, and is now well and hearty.

I introduce this case to show the effect of irritation of the os internum, when produced artificially. Does not menorrhagia sometimes arise from irritation, owing to a morbid condition of the os internum? Do not abortions often arise from the same cause? Does not dysmenorrhœa almost always arise from an excessive sensitiveness, and consequent spasmodic contractility of the os internum, which is in fact a sphincter? Do not puerperal convulsions, especially those of a hysterical character, sometimes arise from the same cause?

Judging from the effect produced by artificial irritation of the os internum, we may infer that like effects would ensue from a morbid condition or irritation of this part. Any remedy that will allay irritation in this centre of sympathy in the female, would be of inestimable value. I do not pretend to say, that bromide of ammonium will do it. It requires further trial. I *think* it applicable in all cases of nervous females, where the nervousness arises from uterine irritation. It may extend to all irritations of mucous surfaces.—*Chicago Medical Examiner.*

Bibliographical Notices and Reviews.

A Practical Treatise on Fractures and Dislocations. By FRANK HASTINGS HAMILTON, A.B., A.M., M.D.; Lieut.-Colonel; Medical Inspector U. S. A.; Prof. Military Surgery and Hygiene, and of Fractures and Dislocations, in Bellevue Hospital Medical College; one of the Surgeons to Bellevue Hospital Med. College; Prof. of Military Surgery, etc., in Long Island College Hospital, Brooklyn; Author of a Treatise on Military Surgery. Second edition, Revised and Improved. Illustrated with Two Hundred and Eighty-five Wood-cuts. Philadelphia: Blanchard & Lea, 1863. pp. 752.

This work has been on our table for several months. We deferred noticing it in the hope that we should be able to find time to make a pretty clever account of its contents. We are still unable, however, to do little more than announce the appearance of the SECOND EDITION. It is bound in cloth and makes a very nice appearance. The author tells us that he has in this edition sought

to give a very faithful record of the subject of which the work treats. Some portions have been amended, some paragraphs excluded, and considerable additions made. A *short chapter* on "Gunshot Fractures" has been added to this edition. The work has been placed on the "Supply Table" of the Army, a compliment it deserves.

This is the first American work on "Fractures and Dislocations." The only works in the English language specially devoted to such subjects, were those of Dessault and Boyer, translated from the French some fifty years since, and those of Robt. Smith and Sir Astley Cooper; the former on "Fractures in the vicinity of Joints, and Certain forms of Accidental and Congenital Dislocations," and the latter a Treatise on Dislocations and Fractures of the Joints. Malgaigne's work has been before the profession of Europe for some years, and has lately made its appearance here. It is perhaps the most thorough and elaborate of any that has been written on the subject.

Prof. Hamilton has placed the profession here under obligations to him, by collecting from the medical Journals of our country all that in any way related to the subjects of "Fractures and Dislocations." He has made up his book, indeed, as much as possible from material gathered at home.

It is not necessary for us to say that this work is meritorious. The author has been at more than common pains to see what others have done in his line, and how they have done it. He has, as the reader may observe, passed much of the work of his predecessors in review. Where he has attempted criticism and the reform of errors, he has been liberal and candid. No one really can look through the work without being impressed with the close, rigid thought everywhere present.

Surgical science appears to good advantage in the treatment of Fractures and Dislocations. Still, it should always be recollected that we are yet very far from perfection. In the treatment of Fractures both in this country and Europe, the rule is, "*imperfect results.*" This is conclusive as to one of two things—either wrong plans of treatment, or an impossibility in attaining to perfect results. That we have the right dressing for many fractures is what some are very slow to believe. It may with great propriety be doubted whether there is yet invented an apparatus suitable to prevent shortening of the femur when factured obliquely, or such

as will prevent deformities in fractures of the patella, clavicle, olecranon. The work before us is very full, it must be acknowledged, of suggestions and fixtures for each of the above accidents. We notice, though, nothing new. The author has contented himself with a resumé of what others have proposed.

The confident tone characterizing the writings of authors on the treatment of fractures has had the effect of placing the profession in a position that has not always proved either convenient or profitable. A surgeon of eminence after, for example, having had a successful result in a case or two of fractured thigh, publishes to the world an account thereof, and with the assurance that cases may always be treated with the same results. Such cases have been made the standard by which members of the profession have been judged. Young men in the profession have been often called to account for results that were unavoidable in any one's hands, simply because some one, in an incautious mood, had said that perfection ought to be the rule in all cases of fracture of the thigh.

The "repair of broken bones" is a subject upon which there has been and is now some diversity of opinion. It is deeply interesting to the student, because he will find that his success will depend on having some knowledge of the subject. It seems to be true that, between the broken ends of bones, there is poured out a reparative material, a plastic substance, called by some *callus*, and that this matter becomes the bond of union between the fragments. In the language of Dupuytren, "Nature never accomplishes the immediate union of a fracture," save by the formation of two successive deposits of *callus*, one of which is derived from the periosteum and the adjacent tissues, and from the medulla; while the other, derived from the broken extremities of the bone itself, is found at a later period directly interposed between these surfaces. The *callus* deposited on the outside of the bone has received different names, according to the particular views of authors. Galen called it a "ferule;" Paget, "ensheathing" callus; Dupuytren spoke of it as "provisional" or temporary. The interior portion of this "provisional" callus has, by pretty general consent, been called a "plug," or rather compared to a plug. The band of callus on the exterior, and the plug corresponding with the cavity and between the ends of the fragments, make up a kind of natural apparatus for keeping the parts in position. For this material Dupuytren's name, "provisional," is the best. The substance is

merely provisional, is nature's provision to prevent movement of the ends of the bones. This provisional callus is matured into the condition of spongy bone. At what time after a fracture does nature commence pouring out this provisional callus? and at what time is it so well solidified as to render the bones immovable? These are questions that interest the surgeon. It seems to be of but little use to put a patient in restraint for the purpose of securing coaptation of the fragments previously to the period when nature puts on her splint. Dupuytren thinks the deposition of callus commences about the *eighth* or *tenth* day. The period of course varies according to the age of the patient and the character of the fracture. In children or young persons of vigorous constitution, the process of deposition would be earlier than in old persons; and in compound fractures and comminuted fractures the period would be later than in those of a simple character. The author just cited, thinks that the process is completed so fully as to render the fragments immovable by the twentieth or twenty-fifth day. This, too, depends to some extent on age and the character of the fracture. It is to the surgeon an important period, because previously to the time the callus is solidified changes may be made in the way of adjustment; but none after that period. The "provisional" callus, by pretty general consent, is regarded as continuing until about the fifth or sixth month. From this period until the end of the tenth or twelfth month nature is employed in removing the *provisional* material; or in other words, in dressing up the parts in order that the limb may be as smooth as possible.

Dupuytren's doctrines, although in general we think very near the truth, have been modified some by recent research. Perhaps Dupuytren was a little too mechanical in his views. He certainly had the truth to commence with, but he seems to have erred in supposing that the process he described for the repair of broken bones was the only one. It is supposed that we may have a reunion of broken bones without the interposition of this reparative material; and again, it is suggested that when the callus is thrown out it does not always make a sheath for the exterior of the bone, or a plug for the cavity, but is found to be deposited very partially. This is true of bones situated superficially; such, for example, as the tibia. It is no unusual circumstance to find, after a fracture of the tibia, absence of callus upon the more superficial parts, while those parts covered up deeply with muscles have the callus.

From this brief review of the subject of the repair of broken bones, it is seen that it requires about twelve months to complete the cure of a case of fracture. How much is such a fact appreciated? Twelve months is the period during which, by accident or premature use, the ends of the bones may become displaced. How many patients have been instructed to refrain for a year from the use of a limb that has been fractured? It is true that such may not always be necessary, but it is also true that many cases require restraint for a longer period than twelve months from the date of the fracture.

A matter of some importance in forensic medicine is, that the material deposited between the fragments of a broken bone becomes more compact and harder than natural bone; and, all other things being equal, a bone would be more difficult of fracture at the point previously fractured than at any other.

Nearly three hundred pages of the work are devoted to *Dislocations*. The general subject of dislocations is but partially discussed. Enough is said, however, to call attention to the subject and stimulate inquiry. The remarks of the author are generally very correct, but they seem to us not as exhaustive as they should have been in a work principally devoted to the subject of dislocations.

The first indication of treatment is to reduce the bone, the author says; and he considers all the modes of accomplishing this result properly coming under the heads *Extension* and *Manipulation*. On the subject of "extension" we see nothing especially worthy of note. The mode of reduction by manipulation is discussed at length, and, as we think, placed by the author in its proper light. We think the revival of manipulation one of the great improvements, if not the greatest, of modern times. We say the revival of the method of reducing by manipulation, because it appears the mode is as old as medicine. Hippocrates practiced it. "In some," he remarks, "the thigh is reduced with no preparation, with slight extension directed by the hands, and with slight movement; and in some the reduction is effected by bending the limb at the joint and making rotation." This looks like a very clear instance of the employment of manipulation for the reduction of the thigh-bone. Wiseman, who wrote about two centuries since (and, by the by, wrote an excellent work), seems to have also practiced the same method of reducing the thigh-bone. Quite a number of surgeons

appears to have practiced the method since the time of Wiseman, including Dr. Phillip, Syng Physic, Prof. Nathan Smith of New Haven Medical College, and Dr. Wm. Ingalls of Chelsea, Mass. Now while there can be no doubt at all that this method of reducing a dislocated thigh-bone was practiced by quite a number of surgeons anterior to our age, it is nevertheless a fact that the process was so little appreciated, if even understood, that but few treatises on surgery noticed it, and that no mention of it is made by any of the works of the present century until since the year 1851, when Dr. W. W. Reid of Rochester, New York, called the attention of the profession to it. Dr. Reid published an account of the method practiced by himself in three cases of dislocation upon the dorsum *illii*, the first of which dated from the year 1844. His method, as applied to a dislocation on the dorsum of the ilium, consists in "flexing the leg upon the thigh, carrying the thigh over the sound one, upwards over the pelvis as high as the umbilicus, and then abducting and rotating it." To Dr. Reid, then, we are indebted for the exhumation of this process, to say the least. He brought it forward and revitalized it by the publication of three successful cases, and now it may be regarded as an improvement that will live as long as medicine itself. We have but a very limited experience in the mode of Dr. Reid, but this, limited as it is, has impressed us with the superiority of the method over all others.

We close our brief notice of this volume, and very cheerfully commend it to our readers.

Statement of the Object and Methods of the Sanitary Commission, appointed by the Government of the United States, June 13, 1861. *Published by its direction.* New York: Wm. C. Bryant & Co., 1863.

This report has been laid on our table, and we find, from its perusal, that it is a purely voluntary organization, its object being fully set forth by its title. The Government, it is known, has also an organization for Sanitary purposes. The two organizations act independently of each other; the one depending for its supplies upon private, the other from public sources.

The Treasurer of this organization reports having received in cash, from June, 1861, until Dec. 7th, 1863, $919,580.98. The disbursements of the Central Treasury for the eight months ending

Dec. 1st, 1863, have been $341,118.83; or, on an average, a little over forty-five thousand dollars a month.

The Commission meets at Washington quarterly, and holds special sessions when required. During the intervals between its sessions its affairs are administered by its chief executive officer, the General Secretary, and by a Standing Committee of five of its members, which meet daily in New York. Two Associate Secretaries are at Louisville, and a second at Washington; the former charged with the work west of the Alleghanies, the latter including positions on the sea-board and the city of New Orleans. Besides the officers enumerated, there are several hundred "Associate Members," selected at prominent points of the country.

During the summer of 1861 the Army was supposed to be in great danger of being destroyed by epidemic disease. As a consequence the Sanitary Commission was organized. The first business of the Commission, therefore, was to awaken general attention to the sanitary interests of the Army by improving the condition of camps, hospitals, and men. Officers were at once warned of the consequences of filth, bad ventilation, bad food, and unnecessary exposure.

The following concerning our armies and the British is given by way of comparison:

"The average annual loss of the whole British Army during the Peninsular War was one hundred and sixty-five men out of every thousand. Of these one hundred and thirteen died by disease or accident.

"From 1803 to 1812 the average annual death-rate of the whole British Army 'abroad' was 80 per 1,000—71 by disease and accident, and 9 by wounds in action.

"In July, August and September, 1854, the British Army in the Crimea lost at the rate of two hundred and ninety-three men out of every thousand per annum. Ninety-six per cent. of this loss was from disease. During the next three months, October, November and December, 1854, their loss was at the annual rate of five hundred and eleven out of every thousand, seven-eighths of which loss was by disease. In January, 1855, it was *at the rate of* 1174 *per* 1,000 *per annum*, 97 per cent. of this loss being due to disease. During the first three months of that year it was at the annual rate of 912 per 1,000, and ninety-eight per cent. of the loss was due to disease.

"Up to May 18, 1862, our armies had lost at the rate of fifty-three per thousand per annum, and only forty-four per cent. of that loss was by disease and accident.

"In estimating the value of these figures, it must be remembered that the conditions under which our soldiers serve have been generally unfavorable. Their field of operations includes large districts quite as insalubrious as any part of Spain, Portugal or the Crimea. There has at all times (and especially during the first year of the War) been among them a large proportion of half-disciplined recruits and of inexperienced officers, while the soldiers of Great Britain in the Peninsula and the Crimea were regulars under high discipline, and commanded by professional officers. The Commissariat and the Medical Department of the British Army were parts of a system long established and matured. In May, 1862, ours were newly organized (for the purposes of this War), and not yet in perfect working order. The Peninsular and Crimean Armies had therefore material advantages over our own. Yet we have lost fewer men by disease. Even on Morris Island and in the pestilential swamps of the lower Mississippi our loss by disease has been smaller than that of any Army about which we have authentic information."

Editorial and Miscellaneous.

Sixteenth Volume.—With this number we commence the sixteenth volume of the JOURNAL, and with the determination to make it, if possible, more useful in the future than it has been in the past. No duty is perhaps more difficult than the one of conducting properly a medical journal. To select from the labors of correspondents, and from exchanges, what will interest and benefit the reader, is a task the performance of which is by no means easy. Editors are apt to make their own taste the standard; and it is easy to see that very egregious mistakes, as a consequence, may be committed. Our object has been to furnish our readers with the views of cotemporaries, and to record facts, phenomena, and

events. In venturing opinions of our own it has been our aim to see first what the fathers, the good and the great, have said. In adopting this course, we have imagined our feet to rest upon the surest possible foundation.

In noticing or reviewing new works, supposed errors have been pointed out, though not in a spirit of hyper-criticism; while merit when present, has always been fully bestowed. In no instance have we ever introduced a personality into the work.

Within the last three years our "exchanges," which had been between thirty and forty, representing all sections of the continent, have diminished down, until we scarcely have half a dozen upon our list, and several of these are very tardy and irregular in their appearance. A variety of circumstances have contributed to this result. Most of the journals have been discontinued from the increased expenditure necessary to their publication, and the circumstance that a large proportion of subscribers are absent from home engaged in military duties. An additional explanation may be sought for in the fact that the present period is one of action more than of deliberate thought; the stock accumulated is in demand, and but little time or disposition to engage in new inquiries, or see what our friends abroad are doing upon the frontiers of our science.

Of course it is not strange that under such a condition of things a question involving the continuance of this work, which has now been in existence for a period of fifteen years, and issued most of the time with great regularity, should have been agitated. When, however, the subject is viewed properly, a number of reasons may be assigned why the work should be continued. These will readily suggest themselves to any one who will think for a moment.

Surgeon-General Wm. A. Hammond.—This gentleman has been arraigned before a Board of Examiners charged with defrauding the Government. The specifications are quite numerous and relate entirely to movements connected with his official station. It is to be hoped, for the credit of the profession, that the charges against the Surgeon-General may all prove, on investigation, to be false.

The "Calomel and Tartar Emetic" ediet, showed the Surgeon-General to have a very respectable stock of vanity on hand; and also had the effect to induce right minded men to suspect that

there might be emergencies some time or other, that would reveal cerebral weakness in his case. Still no one, as far as we have heard, entertained apprehensions of a fissure in the Surgeon-General's moral nature. We hope the Surgeon-General may be equal to the troubles before him.

Death of Prof. L. M. Lawson.—We are pained to have to announce, in this number, the death of Prof. L. M. Lawson. This event took place in Cincinnati on the 21st of January.

We have no material at hand for making up a suitable notice of the deceased. As a medical scholar, a journalist, and an author, Prof. Lawson impressed himself very favorably upon the age in which he lived. He commenced his public career as Editor of the *Western Lancet*, the first number of which he issued in Cincinnati in May, 1842. He continued as sole editor of the work for some years, when it passed into other hands, and is still issued in Cincinnati by the title of *Lancet and Observer*. As a professor, Dr. Lawson has been connected with several schools of Medicine. He gave his first course of lectures in Transylvania University, Lexington, Ky.; subsequently he has occupied chairs in Louisville, New Orleans, and at his death in the Ohio Medical College.

After Dr. L. retired as editor of the *Western Lancet*, he commenced the composition of a work on diseases of the lungs. The work he entitled, *A Practical Treatise on Phthisis Pulmonalis, embracing its Pathology, Causes, Symptoms, and Treatment.* The work was issued in Cincinnati by Rickey & Mallory, and in New York by S. S. & Wm. Wood, 1861.

To the medical profession Dr. L. devoted his life exclusively. Possessed of a good order of intellect, he was one of the number never diverted in the direction of any of the sophistries with which scientific medicine has been of late so much diluted. With an abiding faith in the power of drugs, he applied his powers industriously in investigating their application to the cure of disease.

As a writer, Dr. L. was one of the most voluminous in the West. Many of his essays are models of fine composition, while his treatise on diseases of the lungs shows, among other things, in an eminent degree, the beauty and force of which our language is capable.

XUM

As a teacher, Dr. L. was very successful. His didactic efforts were very popular with students, which, by the by, is a good test of merit. Intuitively he seemed to possess the power of extracting the available and the important of his department, and these he laid before his audience in accordance with the laws of intellectual ingress.

In his social relations, Dr. Lawson possessed very excellent qualities. Dignified and noble in his bearing, he was also modest and amiable in disposition. Towards the young men of the profession, he was kind and liberal, and towards none censorious. The medical fraternity of the city of Cincinnati have lost in the death of Dr. L. one whose memory it will delight to honor, while the Faculty, of which he was a member, will feel keenly the sad bereavement.

Braithwaite's Retrospect.—The January No. of this work has just been received. It is published in New York, by W. A. Townsend. There are agents in all the large cities of the country, and besides, the work can be had from most of the booksellers. It is issued twice a year, at $2.00; single copies, $1.25. The work was commenced in 1840, and has been issued simultaneously in this country with the London edition. It is a valuable compendium of Medicine and Surgery. The excellence of the work consists in the fact that it embodies in a confined space the most valuable articles of the medical periodicals of this country and Europe.

Psychometry.—This is a new edition of spiritualism. The "mediums" have made a fresh start. Tired of the old processes of rapping, bewitching tables, etc., they now announce that they have acquired the power of reproducing, in all its vividness, the PAST. The old name "*medium*" is doffed, and those claiming the possession of the powers wish themselves known as psychometers. By merely touching a piece of any thing—a piece of wood, bone, or stone—these characters can tell, they say, all that has ever happened to it. Touching an individual they, in like manner, become possessed of his entire history. So things go, they do.

Resection.—The German naturalists have been engaged in discussing at Stettin the subject of *resections.* Bardeleben explained at length the method of operation. He eulogized the plaster bandage in the after-treatment, and dwelt upon the following important points for the success of the operation:

1. None of the capsule of the joint should be allowed to remain.
2. The after-treatment must be carefully and minutely attended to. A plaster bandage strengthened by strips of wood is best adapted to this purpose, and it should be water-tight, so that the water-bath may be employed.

To Subscribers.—As the business department of the Journal for the ensuing year will be conducted exclusively by Prof. T. G. Wormley, subscribers will confer a favor by sending their remittances to his address. They will please give their address in full, always stating the county. Persons desiring to complete broken sets of the Journal can be supplied with most of the previous volumes, or separate numbers, at half their published price. It is most earnestly requested that all who know themselves indebted will promptly forward the amount.

Ovariotomy.—The following remarks from an article in the *Gazette Hebdomadaire,* though it may not gratify our national pride, may interest our readers, and at all events afford a good example of French vanity:

"In order to remove these enormous tumors we are compelled to largely open the abdomen, and to manœuvre within the depths of the most vast visceral cavity, the one most disposed to inflammation, and the inflammation of which is the most redoubtable of all. The necessities of the operation often give rise to prolonged and multiplied manœuvres, to extensive lacerations, and to almost violent struggles, with the resistances which may arise. Such is ovariotomy in its sombre and too real physiognomy. This formidable operation was first practised, and with success, in France towards the end of the last century, and an account of it is found in the *Mémoires de la Société de Médicine* for the years 1782–83. Since that time, however, our surgeons have not renewed the attempt,

fortunate though this was. Calculating by their daily practice what their art allowed them to attempt, they deemed a like operation beyond the powers of Nature herself, and would not allow an exceptional case to be converted into a law, sacrificing numerous victims for the chance of meeting with an unexpectedly successful result. With good reason, such success did not seem to them to offer a sufficient compensation for the calamities by which it must be purchased. They renounced the extirpation of ovarian cysts, and treated them by repeated tappings, and in later years by iodine injections, which, in cases of simple unilocular cysts, not unfrequently lead to a durable cure.

"The operation, proscribed among ourselves, became, however, gradually adopted in America and England, the surgeons of these countries declaring that they did not meet with the terrible accidents so redoubted among ourselves, while they frequently obtained the cure of a disease almost always fatal. As long as these statements only came to us from the other side of the Atlantic—the distance that intervened, the incredible rashness of American surgery, the absence of control in a society in which individual liberty reigns as absolute mistress, the excesses of charlatanism and hasty publication, and our ignorance of the true value of the men who spoke and wrote—all these circumstances rendered us very incredulous, and we remained peaceably amidst our traditions of timid surgery; but when cases came to us from the other side of the Channel—when we saw London surgeons of repute practising ova riotomy, bringing it within the category of legitimate operations, when we learned their successful results, and were enabled to control these, and when verified statistics swelled their unexpected number—emotion overcame us, and the spirit of resistance gradually gave way. Several of our most distinguished surgeons repaired to London, examined patients already operated upon and cured, saw the operation performed, followed up its results, and had all doubts removed from their mind. Ovariotomy they declared to be a beautiful conquest of modern surgery, and they returned home decided to render it popular among ourselves.

"These occurrences took place just at the time when the Hospital question was being discussed in the Academy. The unsanitary conditions attributed to our hospitals, the mischievous effects of overcrowding upon those who had undergone operations, and the importance of hygienic and consecutive treatment—all these

points, brought into relief during the debates, were taken into serious consideration by those who were desirous of introducing and naturalizing in France the surgical achievements of our neighbors. The most minute precautions were taken before proceeding to the operation, and the patients were placed either in the country, in *maisons de santé* in the neighborhood of Paris, or, if in Paris itself, in separate, well ventilated rooms, uniting every imaginable condition of salubrity. Alas! in spite of all this care, the check which our surgeons have received is lugubrious. The splendid recoveries observed in London have not been obtainable here. We cannot state in a very precise manner the number of women who have been subjected to ovariotomy, but it has been sufficiently large to render the proof decisive. A more or less speedy death has been the termination of most of these attempts, skillfully as they have been conducted. Scarcely have some rare cases proceeded on to a favorable result; and even the recoveries themselves do not exhibit the moving spectacle witnessed by the English surgeon of fearful and complicated manœuvres combined with terrible accidents, yet followed by a cure taking place amidst a state of calmness with a surprising facility. Thus it is that our surgeons, discharged, will for the most part recur to their former timidity, some of those who were at first the most ardent in the attempt, feeling now no disposition to repeat it."

Fever in Hospitals.—We have the melancholy duty of recording the death of another member of the resident staff of Bellevue Hospital. Dr. Rowe is the fifth resident medical gentleman who has died of fever contracted in the discharge of his duties in this institution within the last nine months. During the same period ten more of the staff have passed through the fever, and have recovered or are now convalescing. This is a startling record of mortality under any circumstances, but in the present instance is simply harrowing. Five young physicians in the vigor of early manhood, lingering still in this great practical school to give to their education that perfection of temper and firmness necessary to rapid success, fall victims to fever. In the death of such young men, highly educated, devoted to duty, and of noble aspirations for excellence, the whole profession sustains a great, an irreparable loss. It can ill afford to needlessly sacrifice on the altar of human-

ity those who are so eminently qualified to sustain its dignity and honor, and to advance the science of medicine beyond its present bounds. If these things must needs be, if suffering humanity demands the sacrifice, the victims are always ready to be offered. The noblest members of our profession have yielded their lives a willing offering to stay or mitigate the horrors of pestilential and epidemic diseases. Our hospitals bear ample testimony to the courage and heroic bravery of young medical men in the midst of danger from the most fatal infectious and contagious diseases. No post of duty is deserted, and when one falls another instantly steps forward to fill the ranks.

But however necessary it may often be for the physician to take his life in his hand, and go boldly into the midst of infection, and if need be incur the fearful penalty of death, the question recurs, Is it necessary to sacrifice so many valuable lives of young medical men in our hospitals to typhus or typhoid fever? Are not these preventable diseases? What are the teachings of sanitary science? We earnestly put these questions to the Medical Board of Bellevue Hospital, and to the Commissioners of Charities and Corrections, as the constituted guardians of the sanitary affairs of our largest hospitals.

The spacious and liberally provisioned hospital buildings, with their thousands of comfortable beds, bear testimony to the beneficent and large purposes of the governing Boards of these noble institutions, but if it occurs that by some failure to conform their administration in accordance with the inflexible laws of sanitary science and the requirements of nature, the costly edifices and the richly furnished wards are transformed into fever-nests, and furnaces of infectious and deadly disease, spreading death to all classes of patients, and secretly poisoning the faithful attendants and zealous young physicians who are on duty there, then we are in duty bound to press the inquiry—Who is responsible for the needless sacrifice of these lives? and the official guardians of those institutions must ask, What does sanitary science teach concerning such maladies?

It is not our purpose to enter upon an elaborate discussion of this subject, but it is manifestly necessary that instant and thorough reform should be effected in reference to the causes of endemic and infectious fevers in our hospitals. Though the local-

ization of such maladies is an opprobium to any hospital, lamentable experience in a very large number of hospitals in our country has shown how very difficult is the task of eradicating the typhic poison in the wards and quarters where it finds a wonted nidus and hiding spot. Sanitary science teaches, and experience has abundantly demonstrated, that typhus and typhoid fevers are absolutely preventable diseases, and that the typhic poison itself is not so incorrigible as to defy medical and police control. But the virus of these fevers must be rigorously dealt with as a terrible foe. Its birth is in the crowded ward, the unventilated and densely packed hall, the filthy tenement, and where effete organic matter chances to be accumulated or neglected. The essential fact relating to the processes of these fevers is, that they rapidly waste the organic elements of the human structure, and that in ordinary apartments with an atmosphere at all confined, as by closure of windows and open fire-places, typhic poison is fearfully communicable or personally infectious and contagious. And these are the facts that demand attention from the governing Boards of our hospitals.

Shall the present causes of the fever pestilence in Bellevue and other hospitals continue, because, forsooth, there is supposed to be an *epidemic constitution* of the season or of the atmosphere this year? The same fever tragedy is enacted within the same walls, and from the same preventable causes, year after year; and it will be repeated every winter until those causes are removed. Five of the choicest young physicians in a single institution killed by this stealthy enemy of our hospitals, during the past few months! More such sacrifices will rapidly follow, unless medical men come forward, and, with the redeeming power of sanitary knowledge, effect the needed reform.

As a preliminary step in that work of reform, let a rule be peremptorily ordered in all the hospitals of this city, that patients with typhus or typhoid fever shall not be allowed to remain in a ward where there are any other maladies, surgical or medical; and, secondly, let there be such improvements in the ventilation of all the wards and hospital apartments as will effectually prevent the presence or the continuance of an endemic typhic condition. *An abundant and continual supply of fresh air dissipates and destroys the typhic poison.*

But the windows will be closed, the fire-places are already hermetically sealed in most wards, and, sad to say, nurses and patients alike cry out against fresh air; they are not accustomed to such air; surgical patients, consumptives, dyspeptics, and bed-ridden patients with organic maladies, will not endure and do not need such ventilation as the fever patients must have. For such, and for stronger reasons, the fever patients must be put into a domestic quarantine, and should be kept immersed and flooded in fresh air. And for fever wards there should be a specially rigid government, and *specially trained nurses.* This can only be thoroughly accomplished by establishing a fever hospital. And we put the question to the Commissioners: If they ought not to open on the spacious islands under their charge a separate building for the reception and treatment of fever? A simple pavilion can be quickly constructed with full ventilation, which would insure a greater percentage of cures, and complete immunity of attendants from this fatal disease. Such a fever pesthouse is as much required as a separate building for the isolation of small-pox.

We know how vague and uncertain the practical knowledge of these considerations is among medical men; and because we are forced to witness most cruel and needless sacrifices of precious lives, in consequence of such inattention to momentous facts, we speak thus urgently. And we pray our medical brethren to lend their aid to the work of rooting out the fever nests of our crowded districts. Let them insist upon the removal and proper surveillance of all communicable sources of contagious fever, and soon we shall see each hospital establishing a separate and well isolated pavilion for the treatment of such fever; and not until such fever pavilions or "shanties" are substituted for fever wards, or promiscuous wards for typhic patients, will fevers cease to burst forth in our large hospitals; and while the fever demon of the crowded hospital holds carnivals, noble young martyrs will swell the immortal group of faithful physicians whose heroism in duty ennobles the history of the medical art, and to whose names the profession effectionately points and says: *Hæc mea ornamenta sunt.*—*Amer. Med. Times.*

Latent Syphilis.—In reply to an inquiry addressed to medical practitioners in all countries, "On the Influence which an Anti-

Syphilitic Mercurial Treatment of Parents has on the Health of their children," Hebra draws certain deductions from ten cases occurring in his private practice, among which conclusions we find the following: "Syphilis may remain latent in the body, without discovering itself by any symptoms, and first betray itself by the syphilitic affection of the children."—(*Year-Book of Surgery*, 1860, p. 322.) By which is meant, that a man may contract syphilis, and fancy himself well, and yet after marriage, at some distant period, while in apparently perfect health, beget children, who may become the subject of the syphilitic taint in a constitutional form. The great difficulty in obtaining perfectly reliable information on these questions from patients must be admitted by all, but still, with care, we may arrive at a close approximation of the truth.

Hebra states a fact which has been recognized by many in the surgical practice at St. Bartholomew's Hospital for a long period. The two following cases, which came under Mr. Coote's care on August 15, 1863, illustrate, he considers, Hebra's views:

Case 1.—Jane M., aged 27, a healthy looking young woman, married three years, came to the hospital bringing an infant covered from head to foot with syphilitic psoriasis. She said that the eruption showed itself a few days after birth, and the child had since pined and become emaciated. She added that she had had one other child about eighteen months previous, which was born dead. The closest inquiries were made as regarded both her own health and that of her husband. She replied readily and frankly, with the full knowledge of the purpose of the question, and assured us that no illness had shown itself on either herself or her husband in any way during their married life. The child was ordered two grains and a half of mercury and chalk twice a day, and is going on favorably.

Case 2.—Elizabeth A., aged 16, a slightly made, pallid child, living with her parents, came to the hospital with a circular and perforating phagedænic ulcer of the soft palate, the size of a sixpence, with tawny surface and inflamed circumference. There were adhesions of the left iris around the pupillary margin, but no indications of recent iritis. She was questioned with care, consideration being of course shown to her youth, and it was obvious that she was innocent of any irregularity. It was also denied that either parent had ever suffered from syphilitic disease during

married life. The edges of the ulcer were touched with nitric acid diluted with five parts of water. She was ordered three grains of iodide of potassium in sarsaparilla. The case is going on well.

Hebra adds that the reverse may happen, viz: fathers infected with general syphilis may neither infect their wives nor produce syphilitic children. In illustration of this statement, I mention the following case:

Case 3.—Thomas W., aged 38, a respectable man, contracted syphilis twelve years ago, and only on that occasion. He had an indurated chancre at the reflection of the prepuce on the glans penis. It was treated with mercury and disappeared, and the man remained well for two years, when he became the subject of syphilitic lepra, chiefly affecting the arms, chest, and head. In course of time the eruption disappeared, and seven years ago he married. His wife and children are in good health, but he is subject to syphilitie ulceration of the tongue and fauces, and to occasional attacks of lepra in a slight form.—*Med. Times and Gazette*, September 15, 1863.

Excision of a faultily united Fracture of the Humerus.—A rather curious and somewhat interesting case was submitted to operative relief this day week at St. Bartholomew's Hospital. A man, aged about twenty-six, sustained on board ship a fracture of the left humerus at its upper third, a fracture of his left femur, and some injury to the ankle-joint of the same side, about twelve months ago. The fractures were set by the carpenter of the ship. The thigh united tolerably, but the leg is shorter than its fellow, and there is lameness. The broken humerus united in a faulty manner, so that the parts were almost at a right angle to each other, the projection being directly outwards. The arm was practically useless, and the patient came under Mr. Paget's care. On examination, there was an apparent but not real false joint. The man being put under the influence of chloroform, an effort was made to break the fracture, but without success. Mr. Paget therefore cut down upon it, dissected off the periosteum, and cut out a wedge-shaped piece of the united fracture with a fine saw, and then readily broke the remaining portion. This permitted of complete coaptation; indeed, better almost than if the fracture had been properly set. After all oozing had ceased, the wound was

closed with silver sutures, and the arm was most carefully adjusted on a suitable splint. Union is most certain to ensue; but for a satisfactory union a great deal will depend, Mr. Paget remarked, upon the attention bestowed upon the case by the house surgeon. —*Lancet*, July 18, 1863.

Varicocele of Twelve Years' Duration—Great Pain in the Testicle —Operation by Wire Ligature—Cure.—H. G., æt. 24, a butcher, was admitted into Westminster Hospital, under the care of Mr. B. Holt, April 16, 1863, suffering from varicocele of twelve years' duration. He states that for many years he has been accustomed to ride for several hours a day, and frequently without a saddle; that he does not remember to have met with any accident, but that his business required him to stand for a considerable period of the day; that he always felt weak, but has not been laid up with any serious illness. Twelve years since he complained of pain in his left testicle, which was increased upon exertion, and occasionally was very severe at night. He consulted a surgeon, who advised him to wear a suspensory bandage; but, although he had continued to do so, the pain in the testicle had latterly so much increased as to compel him to abandon his work. Upon examination, the usual tortuous and congested condition of the veins was detected behind the testicle, which, however, could be emptied by placing him in the horizontal position; but when pressure was applied over the external abdominal ring, and the patient was desired to resume the perpendicular, the veins were more swollen than before. The vas deferens could be easily isolated.

Mr. Holt determined to tie the veins with the wire suture by the subcutaneous method; and the patient being placed under the influence of chloroform, and the vas deferens isolated, a needle armed with the wire ligature was passed through the scrotum behind the diseased veins, and made to perforate the scrotum on the inner side. The needle was now made to enter at the same opening, and the wire was passed in front of the veins, and so out at the first puncture, thus no skin was included in the wire loop, but merely the veins and some areolar tissue. The wire was now twisted, and the same proceeding was adopted a little lower down, by which the veins were thoroughly included in two ligatures. The wires were now shortened, the intention being to subject the veins to

compression for three or four days, and then to remove them by simply untwisting them. For the next three days the patient was comfortable, and did not complain of pain. There was slight swelling, and tenderness when the part was touched, but no other pain. On the fourth day Mr. Holt intended untwisting the wires as before described; but the twisted portion was so deeply imbedded that he determined to cut both ends short, and leave them as permanent compressors. The punctures healed in two days, and the wires remained, not exciting any irritation or disturbance, and the patient was able to work without inconvenience. He was detained in the hospital for a fortnight that Mr. Holt might see whether any inconvenience was experienced; but none having occurred at the expiration of that time, he was discharged, but requested to present himself from time to time that the result might be watched. The veins between the ligatures were entirely obliterated, and the patient described himself as perfectly free from any pain in the testicle. He has presented himself occasionally as requested. The wires can be felt, but they do not occasion any inconvenience, and he has resumed his work with a perfect immunity from pain.

Mr. Holt remarked that this was a case from which probably some instruction might be derived. He stated it was not his intention, in the first instance, to have left the wires around the veins; but as there was some little difficulty in their removal, he determined to retain them, as in all probability they would not excite irritation, and they would positively prevent any recurrence of the disease. He considered it was a practice that might be repeated with advantage. The pain of the operation was merely that which resulted from the two punctures in the skin, and the patient had not otherwise suffered, as was almost always the case when any portion of the integument was subjected to pressure. The operation was in itself of the easiest possible kind to perform, and he did not consider the patient need be confined to bed. Should future cases be attended with a like favorable issue, the proceeding would become general, and the pain and time of the patients be considerably abridged, while the question of recurrence would be entirely set at rest, such an occurrence being impossible so long as the wires acted as compressors.—*Lancet*, Aug. 16, 1863.

Clinical Lecture on Cases of Retention of Urine. By JOHN ADAMS, Esq. Delivered at the London Hospital.

GENTLEMEN: I now direct your notice to three cases of retention of urine admitted last week. They are interesting as affording each an illustration of a different class or type of cases.

The first is that of a man thirty years of age, who was admitted for retention from what is called spasmodic stricture, and whose history is briefly this: Ten years ago he was a soldier in the Belgian army, and suffered from severe attacks of gonorrhœa. He was not addicted to drink. Retention of urine came on suddenly, for which there appeared no assignable cause, and he was admitted with an immensely distended bladder. A warm bath was ordered, after an ineffectual attempt was made to pass a moderate sized catheter, and Mr. Spencer, the house-surgeon, passed a No. 10 catheter while the man was in the bath. The instrument was used again the next morning, and he left the hospital in three days with no complaint except a slight scalding in passing urine.

I consider the treatment here pursued quite judicious in such a case. Retention is apt to supervene on free drinking, especially when a patient is affected with a gonorrhœa, and a patient so circumstanced will walk into your room with an enormously distended bladder. You waste no time by leeches, or by the warm bath if you can do without it, but place him against a wall in the upright posture, and take a rather small elastic catheter, which you will slip in at once, and you may probably draw off a couple of pints of urine. You will often find in private practice that you may be called up to such cases; you will also find that the patient will not call on you again, until, from some irregularity of living, he has need of a repetition of your services. The cause of the retention is not apparent in this case, but it may be fairly said to have arisen from spasm, coupled with some inflammation of the urethra.

The next is a case of retention of urine from an enlarged prostate: the man's age is seventy-six. The history of this case is plainly that of a man who, although a free drinker in early life, enjoyed uninterrupted health until he was fifty years old, when he began to suffer pain in the kidneys, and his urine deposited a brown sediment and had a very unpleasant smell: these latter conditions probably depended on a slight mixture with blood. These symptoms continued with varying degrees until he had reached the age

of seventy-one, when he found a difficulty in passing his water; and at last he had complete retention of urine, for which he was admitted under my care. The prostatic catheter was passed, and he left the hospital after a month's treatment apparently quite well. He was again relieved of a retention of urine by the catheter in this hospital in September last; and he now comes in again in precisely the same state, and he is relieved in the same manner, and so he will go on until the end of the chapter.

He is a hale, hearty man, and evidently has suffered but little pain from his disease.

Such cases are of almost every-day occurrence, and therefore it is of the utmost importance that you should understand them. In these cases it is of no use whatever to waste any time in the employment of leeches, the warm bath, or medicine. The retention is from pure mechanical obstruction, and you must draw the urine off with the catheter. You must at once introduce the prostatic catheter, and with the manipulation always recommended in such cases there is no difficulty in relieving your patient. The after-treatment consists in the use of the catheter two or three times daily until the patient can pass his urine without it; and if he cannot do this after two or three weeks, it will be your duty to teach him to introduce the catheter and draw the urine off himself. In this way he may live on for many years, and enjoy such comforts of life as may appertain to his advanced age.

The last is a case of retention from permanent stricture, in which it was necessary to puncture the bladder. The patient is a young man thirty-two years of age, who has been the subject of permanent stricture for many years, and in whom no catheter has ever been passed. I was called to him a week ago, and found that attempts had been unsuccessfully made to relieve the retention. He had lost a large quantity of blood by the urethra, and had only passed a gill of urine whilst in the hot bath. I attempted to introduce the catheter, but failed, and found that the instrument passed out of the canal by a false passage. There was no great distention of the bladder; and as he had a drop of croton oil, which had not operated, I ordered him to take thirty drops of laudanum; and I directed the house-surgeon to send in the evening if his bladder was not relieved, as I anticipated the necessity of puncturing the bladder. Things turned out as I expected, and I requested Mr. Cooper to see the patient in my absence, and to act as his judgment

suggested. Mr. Cooper punctured the bladder per rectum, and drew off three pints of urine. The instrument was left in.

Now mark the result in this case: in less than two days from the time the bladder was punctured the urine flowed freely by the urethra, and the man is now comparatively well.

This case is interesting in every point of view—first as illustrating a very common class of cases, and next as showing the great value of the simple operation of puncturing the bladder per anum. Much advantage was gained in reference to the operation by waiting until the bladder was greatly distended, because this facilitates the operation, and removes all risk of wounding the peritoneum, inasmuch as this important serous membrane is pushed far beyond the seat of the puncture in proportion as the bladder becomes distended. It is also a point of great interest to know that in such cases, when all tension and irritation are removed by the drawing off of the urine through the new and artificial channel, the breach in the urethra is speedily repaired, and the urine in a few days passes through it. The relief is so complete where the bladder is punctured that some instances are on record in which patients have refused after many years to have the canula removed except for the purpose of being cleaned, regarding it as a safety pipe not to be lightly relinquished: I alluded to cases of puncture above the pubes.—*Lancet*, Nov. 14, 1863.

New York Pathological Society.

REMOVAL OF AN INCH AND A HALF OF COMMON CAROTID ARTERY FROM THE SUBSTANCE OF A CANCEROUS TUMOR—LIGATION OF JUGULAR VEIN—RECOVERY OF THE PATIENT.

Dr. Conant exhibited an inch and a half of the common carotid artery of a gentleman 70 years of age, residing in New Hampshire. The patient, about two years ago, had suffered from a carbuncula inflammation of the right side of the neck, continuing for several months. Finally the diseased parts healed over, though it left the patient in rather feeble health. A few weeks after a little tumor showed itself on the right side of the neck, and appeared to be merely one of the enlarged cervical glands. This tumor continued to increase in size for nearly eleven months, when Dr. C. saw the

case. He, however, merely prescribed an anodyne application, and some internal remedies. A few weeks subsequent to this the tumor seemed gradually to disappear. Indeed, for some months it was almost entirely gone, when all of a sudden, during the last spring, it began to increase in size more rapidly than before, and on the 13th of June, when the patient was again seen, very strong fears of the existence of a malignant element in the tumor were entertained. The mass extended so far downwards that it gave rise to symptoms of pressure on the brachial plexus of nerves. In the course of the next five weeks the pain in the arm gradually increased, and superadded to this was considerable pain at the side of the neck. This pain had become so severe that, in order to obtain sleep at night, he was compelled to crowd his finger underneath the tumor and above the clavicle, in order to remove pressure from the nerves. By the 15th of July the tumor had increased so much in size as to fill a pint bowl. The trachea was crowded an inch to the left of the median line, the sterno-cleido mastoid muscle was thrust forward, the anterior edge of the trapezius was dissected up, while the lower portion of the tumor was fastened down against the upper portion of the clavicle. The patient being very anxious for an operation, and he being in a condition to warrant some surgical interference for his relief, Dr. C. consented. After the administration of ether an incision was commenced on the posterior part of the cleido-mastoid, and carried to the clavicle, then along the clavicle to the trapezius. The flap being turned up, the tumor was perfectly smooth. The inferior and posterior portion of the tumor was readily enucleated, but while dissecting underneath the sterno-cleido mastoid muscle it was found that the mass of disease had surrounded the common carotid artery and jugular vein. It was also found, in dissecting the upper portion of the tumor, that the parts were plentifully supplied by branches of the carotid; this was firmly ligatured. The diseased mass was then gradually sliced down until the jugular vein was reached, when it was found to be full of matter, and hard. It was then discovered that the ligature had included the vein as well as the carotid and its branches. The artery at the lower part of the tumor, about an inch and a half below this point, appearing to be very fragile, a second ligature was applied. As much of the tumor was removed, by slicing, as could be done, without taking out its intermediate portion, leaving artery and vein intact, surrounded by a small

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portion of tissue. The case progressed very well, subsequent to the operation, so that at the end of three weeks he was able to go alone to his barn and attend to minor affairs about the farm. At the end of five weeks the wound had entirely healed, except at the point where the ligature came through. The upper ligature had not come away, and in withdrawing it Dr. C. brought with it that portion of the vessel (1½ inch) included originally between the ligatures. The patient at last accounts was doing well, though there was still considerable discharge from the wound. The cervical glands again show a tendency to enlarge. The tumor was cancerous.

Dr. Eliot asked if it were usual for malignant tumors to decrease during any particular stage of their existence.

Dr. Conant replied that such was so unusual that in the instance referred to he was inclined at one time to the opinion that the disease was not of a malignant character.

Dr. Clark remarked that vascular malignant tumors were very apt to vary in size at different periods, according to the amount of blood they circulated. In this connexion he referred to a case of cancer of the tongue, which was shown him some years ago by Dr. Buck. At one time the tumor decreased so markedly in size that Dr. Buck was inclined to give up his diagnosis, but in the course of a week after the disease again took on a very rapid growth. Dr. Clark examined the tumor microscopically and proved it to be of a cancerous character.

DOUBLE AMPUTATION.

Dr. Conant related the case of a severe rail road accident, which occurred on a train on which he happened to be a passenger. The patient was a newsboy, who fell from the train, and two cars passed over both his legs, severing one completely, and leaving the other hanging by a small strip of flesh. He performed a double amputation, one at the junction of the upper and middle-thirds, and the other a little lower down. With the exception of the occurrence of secondary hæmorrhage from the detachment of the ligature, by another surgeon two days after, the patient did well. He merely related the case for the purpose of illustrating how important an operation could be performed by instruments which were carried in a case that could easily be placed in the coat-pocket. The cutting was supplied with an adjustable handle, and all the other required

instruments were packed away in the smallest conceivable space. He had devised the case for the purpose of operating at the Dispensary.

CASE OF TREPHINING.

Dr. Conant also presented a small portion of the skull of a patient whom he trephined under the following circumstances. Happening to be among the Adirondack Mountains, he was requested to see a young man who had sustained a severe injury of the head, and a fractured thigh, by being thrown from a wagon. For seven weeks the patient had lain in a partially unconscious state. The thigh had not united, but around the seat of the injury, an abscess had formed, which was constantly discharging a great quantity of matter. The patient would seem to notice to a slight extent what was going on around him, and would take up a word from a question that would be asked him, and repeat it over and over again, each time louder, until he would be apparently exhausted. His hearing was so acute that he would even catch at whispered words in the same manner. Dr. C. concluded from this circumstance that the grey substance of the brain was affected rather than any other part. On examination at the seat of the injury no lesion of the skull could be detected; still, the friends being anxious for the operation, Dr. C. consented to perform it. Having no trephine at hand he used a chisel and mallet for the purpose, carefully cutting out a small button of bone.

There was nothing particularly noticeable about the dura mater, except, perhaps, that it seemed as if it had shrunk away, notwithstanding there were evidences of the existence of serum underneath. Dr. Conant in this connexion mentioned the fact that he had witnessed a post-mortem examination in a case of typhoid fever, by Mr. Laycock of Edinburgh, in which this peculiar symptom of repeating words was a distinct feature, and that the gentleman maintained that it was due to trouble at the base of the brain, in the floor of the fourth ventricle. At the autopsy Mr. Laycock found a granular condition of the living membrane of the iter a tertio ad quartum ventriculum.

Dr. Clark thought that such a point was a little too finely drawn.—*American Med. Times.*

[From the American Medical Times.]

Paracentesis Thoracis in Empyema. By E. P. BENNET, M.D.

As there is considerable difference of opinion in regard to the deleterious influence of the air when admitted into the pleural cavity, I send the report of two cases of paracentesis thoracis for empyema. The first case was of a boy of about eight years of age, who had suffered from pleuro-pneumonia. Paracentesis was performed, and between one and two pints of pus discharged. No precautions were taken to prevent the admission of air into the pleural cavity, and it entered freely. A second puncture was made about a week later, when another pint was evacuated; the opening so remained, and for several days the air passed freely out and in at every expiration and inspiration, yet no evil consequences followed, and the patient made a good recovery. The second was a child, eighteen months old; the case was a severe one, and when, to all appearance, the child was in articulo mortis, I punctured the chest, and discharged a pint of thick pus. The puncture did not close; the air passed freely out and in for several days; the child immediately improved, and finally recovered, to the utter astonishment of many who saw him. I have often punctured the chest for empyema, and have always found that when the opening did not close up, and air was freely admitted into the pleural cavity, the patient did best. Hence, I am led to conclude that the fears of the profession on this subject are entirely groundless, and that all the instruments for withdrawing the fluid without the admission of air are perfectly superfluous. This opinion is not based on the result of a single case, but of many cases during a series of years.

DANBURY, CONN., Jan. 5, 1864.

Hygromentricity of Confined Places.—Gen. Morin, who has much occupied himself with improvements in the ventilation of public edifices, in a note addressed to the Academy of Sciences, treats of what he terms the "hygrometricity" of confined places. Much struck with the importance which the English engineers and authors attach to the imparting to the air employed for ventilation, whether heated or not, a certain amount of moisture, he was induced to in-

vestigate whether the salubrity of such air might not be due in some measure to the development of a certain amount of electricity by the passage of the air through the vaporized water (as is the case with regard to dew and rain during storms,) giving rise to the production of free oxygen *(oxygéne actif)* If this, or some analogous modification, can be shown to take place, we have placed in our hands a simple, efficacious, and economical means of purifying the air of inhabited places, especially in summer—air containing free oxygen possessing in a high degree the property of burning certain miasmata and emanations from bodies in a state of putrefaction. The General accordingly instituted some experiments in order to ascertain whether the dispersion or solution of a certain quantity of sprayed water in the air sensibly modified its electrical condition. The results show the extrication of free oxygen and the subsequent or concurrent formation of an acid. As both the oxygen and the acid, probably a nitrous compound, possess the property of destroying putrefactive emanations, their presence sufficiently proves that the vaporization of water in air, besides the increase of moisture and depression of temperature which it gives rise to, may exert an action on the animal economy and upon the air of habitations deserving the attention of sanitarians.—*Med. Times and Gaz.*, Nov. 21, 1863.

Marriages of Consanguinity.—M. Seguin denies that marriages of consanguinity have necessarily a tendency to produce diseased offspring. He relates the results of ten marriages which have occurred between his own family and the family of Montgolfier. Eight of these marriages were between cousins-german, and two between uncles and nieces. Between 1812 and 1858, sixty-one children have issued from these unions, of whom forty-six are alive. No case of deaf-and-dumbness, of hydrocephalus, of stuttering, or of six fingers on the hand, has been observed among them. M. Seguin concludes that, when there exists any constitutional tendency to disease in a family, the tendency to its development is increased in the offspring by consanguineous marriage; but that, in alliances between members of a family endowed with a good constitution, there will be augmentation of the vital forces in the offspring. This is, in fact, just what is observed by animals

whose breed is improved by man. M. Flourens remarked on the subject, that it is always well to study long before publishing, and that nothing has hitherto been advanced on the subject of consanguineous marriages worthy of serious consideration.—*Brit. Med. Journal*, Sept. 19, 1863.

Ligature of the Vena Porta and Persistence of the Biliary Secretion.—E. A. Chassagne contends (*Thesis*, Strasbourg, 1860) that the material for the formation of bile is furnished by the hepatic artery, not by the vena porta. He adduces cases (observed by Abernethy, Wilson, Lawrence, Broc,) in which the secretion of bile was normal, although the portal vein did not supply the liver, but went directly to the vena cava, also, cases of obliteration of the portal vein in men without disturbance of the biliary secretion. He then refers to Oré's experiments of which he was a witness, and also communicates four experiments by Bernard on dogs, in which the vena porta was ligatured without disturbance of the biliary functions.—*Ed. Med. Journ.*, Oct. 1863.

Sir Benjamin Brodie's Works.—Messrs. Longman are about to publish a complete edition of the works of Sir. Benjamin Brodie, including his papers scattered in journals, etc. This edition will also contain some remarks on surgical cases upon which Sir. Benjamin Brodie was engaged at the time of his death. The work will be edited by Mr. Charles Hawkins; and is to be accompanied with an autobiographical sketch of Sir Benjamin Brodie.—*British Med. Journal*, May 16, 1863.

The Chair of Chemistry at Berlin, also that at Bonn, have been offered to Dr. Hofmann, of London. The University of Bonn propose to place £20,000 at his disposal for the establishment of a laboratory.

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